

# For Reference

---

**NOT TO BE TAKEN FROM THIS ROOM**

# For Reference

---

NOT TO BE TAKEN FROM THIS ROOM

Ex libris  
UNIVERSITATIS  
ALBERTAENSIS



UNIVERSITY OF ALBERTA  
LIBRARY

Regulations Regarding Theses and Dissertations

Typescript copies of theses and dissertations for Master's and Doctor's degrees deposited in the University of Alberta Library, as the official Copy of the Faculty of Graduate Studies, may be consulted in the Reference Reading Room only.

A second copy is on deposit in the Department under whose supervision the work was done. Some Departments are willing to loan their copy to libraries, through the inter-library loan service of the University of Alberta Library.

These theses and dissertations are to be used only with due regard to the rights of the author. Written permission of the author and of the Department must be obtained through the University of Alberta Library when extended passages are copied. When permission has been granted, acknowledgement must appear in the published work.

This thesis or dissertation has been used in accordance with the above regulations by the persons listed below. The borrowing library is obligated to secure the signature of each user.





THE UNIVERSITY OF ALBERTA

DUAL LEADERSHIP: A STUDY OF INSTRUMENTAL  
AND EXPRESSIVE DIMENSIONS OF PRINCIPAL  
AND VICE-PRINCIPAL LEADER BEHAVIOR

by



DONALD ARCHIE GIRARD

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR  
THE DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

SEPTEMBER, 1967



UNIVERSITY OF ALBERTA  
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Dual Leadership: A Study of Instrumental and Expressive Dimensions of Principal and Vice-Principal Leader Behavior" submitted by Donald Archie Girard in partial fulfilment of the requirements for the degree of Doctor of Philosophy.



Digitized by the Internet Archive  
in 2019 with funding from  
University of Alberta Libraries

<https://archive.org/details/Girard1967>

## ABSTRACT

This thesis studied the leader behavior of principals and vice-principals. The theoretical framework was based on studies of small group processes which suggest group activities are of two distinct types: goal-directed instrumental activities and group maintenance expressive activities. From this a dual leadership theory was developed which postulated there would be a division in leadership functions between principals and vice-principals with one of them the instrumental leader, the other, the expressive leader.

The theory pointed to the possibility that the principal would be the instrumental leader, the vice-principal the expressive leader; that there would be a direct relationship between a given leader's attitude to instrumental and/or expressive activities and the particular style of leadership he manifests; that differential combinations of principal-vice-principal leader behavior styles would be positively related to teacher satisfaction and effectiveness of the leaders.

Study of these relationships was delimited to the instrumental and expressive leader behavior of the principal and vice-principal. Instrumental leader behavior was defined in terms of the LBDQ-XII subtests Initiation of Structure and Production Emphasis; expressive leader behavior in terms of the Consideration and Tolerance of Freedom subtests. The leader's attitude to instrumental and expressive activities was measured by means of the Structure and Consideration subtests



of the Leadership Opinion Questionnaire.

The sample consisted of 91 randomly selected Alberta schools with staff size of not less than eight nor more than fourteen members. The data showed that principals were significantly higher than vice-principals in instrumental leader behavior but the difference in expressive leader behavior between principals and vice-principals was not significant. There was no consistent relationship between supervisory attitude and instrumental leader behavior but there appeared to be a weak relationship between supervisory attitude and expressive leader behavior. Differential combinations of principal-vice-principal leader behavior styles did not appear to be positively related to teacher satisfaction and effectiveness of the leaders.

The vice-principal appeared to play a supplementary role subordinate to the principal rather than a complementary one as suggested by the theory. Therefore, dual leadership theory was not a satisfactory framework for explaining differences in leader behavior between principals and vice-principals. Perhaps the findings of processes in small experimental groups do not generalize to formal groups in organizations; perhaps the delimitation of the study to leader behavior of the formal leaders, only, narrowed the scope excessively. The findings of this study did point to the possibility that instrumental leader behavior is more a function of situational factors than personal factors and that the formal leader's unique and direct contribution may be largely in the expressive dimension.







## ACKNOWLEDGEMENTS

The writer acknowledges, with special thanks, the encouragement, assistance and criticism supplied him by members of his thesis committee. In particular the writer acknowledges the special contribution of Dr. W. Neal who assumed chairmanship of the committee after the research proposal had been approved.

Thanks are also due to the teachers, vice-principals and principals who participated in the study. Without their cooperation this project would not have been possible.



## TABLE OF CONTENTS

CHAPTER	PAGE
I. THE PROBLEM . . . . .	1
The Theoretical Framework . . . . .	4
Introduction . . . . .	4
The Bale's Model of Group Processes . . . . .	9
Summary . . . . .	15
Dual Leadership . . . . .	15
The Basic Theory . . . . .	16
Dual Leadership in Formal Organizations . . . . .	17
Dual Leadership in Schools . . . . .	21
Summary of the Theory . . . . .	24
Definition of Terms . . . . .	26
School Types (General) . . . . .	26
Supervisory Attitude . . . . .	26
School Types (Supervisory Attitude) . . . . .	27
Leader Behavior Style . . . . .	28
School Types (Leader Behavior Style) . . . . .	30
The Research Hypotheses . . . . .	31
II. RESEARCH PROCEDURES . . . . .	36
Delimitations . . . . .	36
The Leader Behavior of the Formal Leaders . . . . .	36



CHAPTER	PAGE
School Size and Geographic Location . . . . .	41
Assumptions and Limitations . . . . .	42
Assumptions. . . . .	42
Limitations . . . . .	44
Instrumentation . . . . .	45
Instrumental and Expressive Leader Behavior.	45
The LBDQ - XII . . . . .	47
The Measurement of Instrumental Leader	
Behavior and Expressive Leader Behavior .	49
Supervisory Attitude . . . . .	56
Rated Effectiveness and Expressed	
Satisfaction . . . . .	60
Rated Effectiveness . . . . .	61
Expressed Satisfaction . . . . .	61
III. DESCRIPTION OF THE SAMPLE . . . . .	64
Sampling Procedures . . . . .	64
The Sample . . . . .	65
Total Administrative Experience of	
Principals and Vice-Principals . . . . .	69
Administrative Experience of Principals	
and Vice-Principals in Present Schools . . . .	71
Summary of the Chapter . . . . .	74



CHAPTER	PAGE
IV. ANALYSIS OF THE DATA: THE DISTRIBUTION OF LEADERSHIP FUNCTIONS . . . . .	76
Introduction . . . . .	76
Overview of the Analysis . . . . .	76
Descriptive Statistics of the Sample. . . . .	77
Supervisory Attitude . . . . .	77
Leader Behavior . . . . .	78
Expressed Teacher Satisfaction . . . . .	79
Rated Effectiveness . . . . .	80
The Distribution of Leadership Functions . . . . .	82
Introduction . . . . .	82
Findings . . . . .	82
Discussion of Findings . . . . .	84
Implications . . . . .	85
Summary . . . . .	87
V. ANALYSIS OF THE DATA: SUPERVISORY ATTITUDE AND LEADER BEHAVIOR . . . . .	89
Supervisory Attitude and Leader Behavior . . . . .	89
Findings . . . . .	90
Discussion of Findings . . . . .	96
Supervisory Attitude and Leader Behavior (Jointly) . . . . .	100





CHAPTER	PAGE
Findings . . . . .	101
Discussion of Findings . . . . .	106
Summary and Conclusions . . . . .	113
VI. ANALYSIS OF THE DATA: LEADER BEHAVIOR, EXPRESSED SATISFACTION AND RATED EFFECTIVENESS . . . . .	115
Leader Behavior and Expressed Satisfaction . . . .	116
Findings . . . . .	117
Discussion of Findings . . . . .	125
Leader Behavior and Rated Effectiveness . . . . .	130
Findings . . . . .	130
Discussion of Findings . . . . .	136
Summary and Conclusions . . . . .	139
VII. SUMMARY AND CONCLUSIONS . . . . .	141
Summary of the Study . . . . .	141
Conclusions and Implications . . . . .	146
The Distribution of Leadership Functions . . .	147
Supervisory Attitude and Leader Behavior . . .	148
Leader Behavior, Satisfaction and Effectiveness . . . . .	149
Concluding Statement . . . . .	151



CHAPTER	PAGE
BIBLIOGRAPHY . . . . .	155
APPENDIX A.      Correspondence . . . . .	162
APPENDIX B.      Teacher Questionnaire . . . . .	173
APPENDIX C.      Administrator Questionnaire . . . . .	180
APPENDIX D.      Distribution of Schools by Sub-Types . . . . .	182



# LIST OF TABLES

TABLE		PAGE
I.	School Sub-types Classified on the Basis of Supervisory Attitudes of Principals and Vice-Principals . . . . .	29
II.	School Sub-types Classified on the Basis of Leader Behavior Styles of Principals and Vice-Principals . . . . .	32
III.	Factor Loadings - Brown Data . . . . .	53
IV.	Factor Loadings - Miklos Data . . . . .	54
V.	Distribution of Schools by Grades . . . . .	66
VI.	Distribution of Principals and Vice-Principals by Sex . . . . .	67
VII.	Distribution of Principals and Vice-Principals by Age . . . . .	67
VIII.	Distribution of Principals and Vice-Principals by Highest Degree Obtained. . . . .	68
IX.	Distribution of Principals and Vice-Principals by Total Experience as Principal . . . . .	69
X.	Distribution of Principals and Vice-Principals by Total Experience as Vice-Principals . . . . .	70
XI.	Distribution of Principals and Vice Principals by Experience as Principal in Present School . . . . .	71
XII.	Distribution of Principals and Vice-Principals by Experience as Vice-Principal in Present School . . . . .	72
XIII.	Distribution of Principals and Vice-Principals by Length of Service Together in Present Positions . . . . .	73



## TABLE

## PAGE

XIV.	Summary of Statistics Describing Supervisory Attitudes of Principals and Vice-Principals. . . .	78
XV.	Summary of Statistics Describing Leader Behavior of Principals and Vice-Principals. . . .	79
XVI.	Summary of Statistics Describing Expressed Teacher Satisfaction . . . . .	80
XVII.	Product-Moment Intercorrelations Among Five Measures of Expressed Teacher Satisfaction . . .	81
XVIII.	Summary of Statistics Describing Principal and Vice-Principal Effectiveness as Rated by Teachers . . . . .	81
XIX.	Significance of Difference in Instrumental Leader Behavior Between Principals and Vice-Principals . . . . .	83
XX.	Significance of Difference in Expressive Leader Behavior Between Principals and Vice-Principals . . . . .	83
XXI.	Significance of Difference in Expressive Leader Behavior Between Principals and Vice-Principals in all Schools Beyond One Year Joint Service . . . . .	85
XXII.	Analysis of Variance of Instrumental Leader Behavior of Principals by Major School Types Classified on Basis of Supervisory Attitude . . . .	91
XXIII.	Analysis of Variance of Expressive Leader Behavior of Principals by Major School Types Classified on Basis of Supervisory Attitude . . . .	92
XXIV.	Analysis of Variance of Instrumental Leader Behavior of Vice-Principals of Minor School Types Classified on Basis of Supervisory Attitude . . . . .	94





## TABLE

## PAGE

XXV.	Analysis of Variance of Expressive Leader Behavior of Vice-Principals by Minor School Types Classified on Basis of Supervisory Attitude . . . . .	95
XXVI.	Description of School Sub-Types Used to Compare Leader Behavior Styles . . . . .	102
XXVII.	Analysis of Variance of Instrumental Leader Behavior of Principals by School Sub-Types Classified on Basis of Supervisory Attitude. . . . .	103
XXVIII.	Analysis of Variance of Expressive Leader Behavior of Principals by School Sub-Types Classified on Basis of Supervisory Attitude. . . . .	104
XXIX.	Analysis of Variance of Instrumental Leader Behavior of Vice-Principals by School Sub-Types Classified on Basis of Supervisory Attitude. . . . .	106
XXX.	Analysis of Variance of Expressive Leader Behavior of Vice-Principals by School Sub-Types Classified on Basis of Supervisory Attitude. . . . .	107
XXXI.	Comparison of Leader Behavior Styles Between Complementary School Types . . . . .	109
XXXII.	Analysis of Variance of Expressed Teacher Satisfaction With Professional Stimulation by School Sub-Types Classified on Basis of Leader Behavior. . . . .	118
XXXIII.	Analysis of Variance of Expressed Teacher Satisfaction with Personal and Social Relationships by School Sub-Types Classified on Basis of Leader Behavior . . . . .	120



## TABLE

## PAGE

XXXIV.	Analysis of Variance of Expressed Teacher Satisfaction with Working Conditions by School Sub-Types Classified on Basis of Leader Behavior . . . . .	121
XXXV.	Analysis of Variance of Expressed Teacher Satisfaction with Social Climate by School Sub-Types Classified on Basis of Leader Behavior . . . . .	123
XXXVI.	Analysis of Variance of Expressed Teacher Satisfaction, All Things Considered, by School Sub-Types Classified on Basis of Leader Behavior . . . . .	124
XXXVII.	Comparison of Higher Ranking and Lower Ranking School Sub-Types for Five Measures of Expressed Teacher Satisfaction. . . . .	125
XXXVIII.	Summary of Differences in Expressed Teacher Satisfaction by Major School Types Classified on Basis of Principal Leader Behavior Style . . . . .	127
XXXIX.	Summary of Differences in Expressed Teacher Satisfaction by Minor School Types Classified on Basis of Vice-Principal Leader Behavior Style . . . . .	129
XL.	Analysis of Variance of Rated Effectiveness of the Principal by School Sub-Types Classified on Basis of Leader Behavior. . . . .	131
XLI.	Analysis of Variance of Rated Effectiveness of the Vice-Principal by School Sub-Types Classified on Basis of Leader Behavior . . . . .	133
XLII.	Analysis of Variance of Rated Effectiveness of the Leadership Team by School Sub-Types Classified on Basis of Leader Behavior . . . . .	135
XLIII.	Comparison of Higher Ranking and Lower Ranking Sub-Types for Three Measures of Rated Effectiveness . . . . .	136



## LIST OF FIGURES

FIGURE		PAGE
I.	Etzioni's Typology of Leaders . . . . .	19
II.	Organization Chart of the Moderately Small School . .	21



## CHAPTER I

### THE PROBLEM

A theme common to much of what has been written about organizations for many years now argues that two conditions are necessary for the survival and continuity of the formal organization. One of these conditions, which Barnard in his classical analysis of the functions of the executive called effectiveness, relates to the degree to which a particular organization realizes its goals.

Goal attainment, however, can be realized in a variety of ways, some of which may have long term dysfunctions for the organization and which may eventually destroy it. Thus Barnard's second condition, efficiency or the degree to which the organization secures and maintains contributions from its members also has long-term consequences for the organization. If the organization is not relatively efficient, the members find the cost of contribution too high, the sacrifices are too great, and the members withdraw their contribution. The effectiveness of the organization becomes diminished and in the long run its survival and continuity become threatened.

A parallel theme has developed in the literature dealing with leadership in formal organizations. Historically the movement can be traced from the age of scientific management with its unique focus on task-oriented instrumental activities, through the human relations phase





with its equally unique focus on individual welfare, to the modern synthesis which recognizes that both instrumental and social-emotional factors are significant dimensions in the functioning of the task-oriented group.

In some cases, particular attention has focused on the extent to which the formal leader manifests interest and activity in both these dimensions. Initiation of Structure and Consideration have developed as concomitants to the effectiveness and efficiency concepts. Much interest has centered around the extent to which both of these behavior styles are characteristic of a particular leader and how differences in behavior between leaders relate to characteristics of the organization.

Latterly, a second line of thought has emerged. The essence of this approach is that the behavior style characteristic of the instrumental dimension is so different from that characteristic of the social-emotional dimension that only exceptional individuals are able to fulfill both roles. This newer approach offers, as an alternative, a division of leadership functions between two leaders. One leader, dominant in instrumental activities, might promote organizational effectiveness; the other, dominant in social-emotional activities, might promote efficiency.

The study reported herein was oriented towards this second approach. The type of formal organization under study was the school and within the school the focus was on the leader behavior of the two formal leaders, the principal and the vice-principal. In particular, the study sought to determine what differences there are in leader behavior between principals



and vice-principals and how these differences might be explained.

Five research problems were derived from the theoretical framework below. The first of these dealt with the distribution of leadership functions between principals and vice-principals: How are instrumental and expressive leadership functions distributed generally between principals and vice-principals?

The second and third problems dealt with the relationship between leadership attitude as the independent variable and leader behavior style as the dependent variable. The second problem dealt with this relationship directly: How significant are personal predispositions to be instrumental or expressive in determining the particular leader behavior style a given principal or vice-principal adopts?

The third problem was, in a sense, a refinement of the second problem because it dealt with the relationship between different combinations of principal-vice-principal leadership attitudes and leader behavior styles: How significant are complementary predispositions of principals and vice-principals to be instrumental or expressive in determining the leadership style which each of the two leaders manifest?

The focus of study changed in the fourth and fifth problems from leader behavior style as the dependent variable to leader behavior style as the independent variable. The dependent variable in the fourth problem was teacher satisfaction: What is the relationship between different combinations of principal-vice-principal leader behavior styles and



teacher satisfaction? The dependent variable in the fifth problem was principal and vice-principal effectiveness: What is the relationship between different combinations of principal-vice-principal leader behavior styles, and the effectiveness of the principal and vice-principal, separately and jointly?

These five problems formed the bases for the research hypotheses which are listed below following the sections dealing with the theoretical framework and definition of terms.

## II. THE THEORETICAL FRAMEWORK

### Introduction

The idea of a division of leadership functions between two individuals springs from studies of small group processes. In these studies many writers have resorted to a dichotomy of one form or another in order to generalize their findings.

Homans,<sup>1</sup> for example, sees the group as a social system consisting of two sub-systems: an external system and an internal system. The elemental properties of activity, interaction and sentiment are present in both systems. In the external system, group behavior is such as to allow the group to survive within its environment.

When the group is a task-oriented one, activity in the external system

---

<sup>1</sup> George C. Homans, The Human Group (New York: Harcourt Grace & World, Inc., 1950).





relates to the tasks individual members do, interaction to communication and coordination between members, and sentiment to the motives for working in the group.<sup>2</sup>

The initial relationships between members in the external system lead to the emergence of a new set of relationships. Interaction, for example, can lead to feelings of liking which can lead to further interaction and a set of activities different from those related directly to the task. Thus develops the internal system, in which activities express attitudes to one another, interaction is social, and sentiments focus around liking-disliking and approving-disproving.

Others view the dichotomy in term of group objectives. Cartwright and Zander say most group objectives can be classified under one of two headings: goal achievement and group maintenance.<sup>3</sup> Examples of behavior directed to goal achievement cited by these writers include such things as initiates action, keeps members attention on the goal, clarifies the issue, develops plans, evaluates and makes expert information available. They cite, as examples of behavior related to group maintenance, such activities as keeping interpersonal relations pleasant, providing encouragement, giving the minority a chance and increasing the interdependence among members.

---

<sup>2</sup> Ibid., pp. 81-107.

<sup>3</sup> Dorwin Cartwright and Alvin Zander, Group Dynamics (New York: Row Peterson and Company, 1960), pp. 496-499.





Goal achievement and group maintenance are reflections of two of the key research concepts in Group Dynamics: locomotion and cohesiveness.<sup>4</sup> Locomotion applies to the group as a whole as well as to individual members and implies goal-seeking behavior. Cohesiveness can be defined generally as "the total field of forces which act on members to remain in the group."<sup>5</sup>, but in practice, as Olmsted notes, it is customary to define cohesiveness in terms of sociometric friendship choices.<sup>6</sup> Cohesiveness deals with affective non-instrumental behavior whereas locomotion deals with task or problem-oriented activity.

The relationship between cohesiveness and locomotion is not a consistent one, especially in task-oriented groups. The findings of some studies indicate cohesiveness promotes productivity but other studies do not support this conclusion. Blau and Scott have suggested that cohesiveness may increase the power of the group to control its members but the direction of this control is determined by other factors, one of which may be the group's orientation to the larger system of which it is a part.<sup>7</sup>

---

<sup>4</sup> Michael S. Olmsted, The Small Group (New York: Random House, 1959), pp. 111-117.

<sup>5</sup> Leon Festinger, Stanley Schacter and Kurt Back, Social Pressures in Informal Groups (New York: Harper & Brothers, 1959) as cited by Olmsted, op. cit., p. 112.

<sup>6</sup> Olmsted, op. cit., p. 112.

<sup>7</sup> Peter M. Blau and W. Richard Scott, Formal Organizations: A Comparative Approach (San Francisco: The Chandler Publishing Company, 1962), pp. 95-6.



A similar duality in interpersonal relations has been expressed in other ways and with different orientations by many others. To Gouldner, it has been a matter of manifest and latent patterns.<sup>8</sup> He argues that authority based on incumbency of office is a manifest pattern; authority based on technical knowledge is a latent pattern. This dichotomy of authority is similar to Peabody's typology of formal and functional authority.<sup>9</sup>

Within formal organizations, March and Simon express the dichotomy in terms of group outputs: productivity and satisfaction.<sup>10</sup> These concepts are similar to Barnard's conditions of effectiveness and efficiency.<sup>11</sup> Getzels and Thelen view behavior in the school classroom as the resultant of two components. A nomothetic component relates to the expectations of the institution and an idiographic one to the personality and needs of the individual.<sup>12</sup>

---

<sup>8</sup> Alvin W. Gouldner, "Organizational Analysis," Sociology Today, Robert K. Merton, editor (New York: Basic Books, 1959), pp. 400-28.

<sup>9</sup> Robert L. Peabody, "Perceptions of Organizational Authority: A Comparative Analysis," Administrative Science Quarterly, VI (March, 1962), pp. 463-482.

<sup>10</sup> James G. March and H. A. Simon, Organizations (New York: John Wiley and Sons, 1958) pp. 34-82.

<sup>11</sup> Chester I. Barnard, The Functions of the Executive (Cambridge: Harvard University Press, 1962), pp. 82-95.

<sup>12</sup> J. W. Getzels and H. A. Thelen, "The Classroom as a Unique Social System," The Dynamics of Instructional Groups, Nelson B. Henry, editor (Chicago: The National Society for the Study of Education, 1960), pp. 53-82.



To summarize, group characteristics have been classified into a dichotomy under a variety of orientations: systems, objectives, dynamics, identities, outputs and behaviors.

At a more fundamental level, Hare argues that interpersonal behavior is a function of a particular individual's biological nature which inputs to his personality, and of the general culture of the environment which inputs to the culture of the small group to which he belongs.<sup>13</sup> In this respect, personality and role are concomitants, in one form or another, of all of the above dyads.

With respect to individuals in organizations, Bennis summarizes as follows:

Organizational and group theories are . . . honeycombed with this duality. For Chester I. Barnard, satisfying the requirements of efficiency (personal relations) and effectiveness (productivity) is the prime task of the effective manager. Harold J. Leavitt refers to "pyramids and people"; Argyris, to the essential conflict between the restricted nature of formal organization and the individual "self-actualization"; and McGregor, to "theory X" and "theory Y" stressing either the organization's or the individual's goals.<sup>14</sup>

He adds that "history has presented us with this explosive legacy, transformed and ossified through many stages and forms, but ultimately reducible to the age-old puzzle of the uneasy balance between individual

---

<sup>13</sup> A. Paul Hare, Handbook of Small Group Research (New York: The Free Press of Glencoe, 1963), p. 8.

<sup>14</sup> Warren G. Bennis, Changing Organizations (New York: McGraw Hill, 1966), p. 65.





and organizational needs, between freedom and authority."<sup>15</sup>

One particular analysis is significantly absent from this introduction. Bales and his associates have noted a similar dichotomy when group processes are observed sequentially. Because dual leadership theory is derived directly from his model, it is discussed in greater detail in the section that follows.

### The Bale's Model of Group Processes

The Bale's model, using problem-solving as a frame of reference, focuses on the interaction content of small group processes,<sup>16</sup> and is designed to provide a "general-purpose framework for observations . . . regarding the structure and dynamics of interaction in any small group . . . ."<sup>17</sup>

Zaleznik summarizes the essence of the Bale's model as follows.<sup>18</sup> Problem-solving activities result in a moving equilibrium in the group between disruptive modes and counterbalancing modes. During the first mode or cycle, task-oriented behavior directed toward the solution of a problem produces competition, aggression and a buildup of tension. This threatens the survival and continuity of the group. Consequently a second

---

<sup>15</sup> Loc. cit.

<sup>16</sup>R. F. Bales, Interaction Process Analysis (Cambridge: Addison-Wesley Press, Inc., 1950).

<sup>17</sup>Ibid., p. 33.

<sup>18</sup>Abraham Zaleznik, "Interpersonal Behavior in Organization," Handbook of Organizations, James G. March, editor (Chicago: Rand McNally & Company, 1965), pp. 600-605.





cycle commences in order to diminish tension and promote cohesiveness. Activities in this second cycle are characterized by catharsis and warmth of feeling in order to re-establish the identity of the group in the minds of its members.

Zaleznik credits Bales and Parsons with describing the task-oriented phase as instrumental-adaptive and the cohesive phase as social-emotional-expressive. Elsewhere Bales puts it this way:

A somewhat more abstract way of describing this alternation is to regard the problems in the task area as primarily Adaptive-Instrumental in significance, while the problems in the social-emotional area are primarily Integrative-Expressive in significance. With this terminology one can hypothesize that the necessity of adaptation to the outer situation leads to instrumentally oriented activity, which in turn tends to create strains in the existing integrations of the group. When these strains grow acute enough, activity turns to the expression of emotional tensions and the reintegration of the group.<sup>19</sup>

Bales claims that the problem solving process in groups involves two basic, irreducible properties: it is distributed over time; and it is distributed between persons. In this context, instrumental and expressive relate to the interaction system over time; adaptive and integrative to the distribution of processes between people, to "the extension of the interactions system in a structurally differentiated outer and inner dimension."<sup>20</sup>

The need for stability and predictability during the process of

---

<sup>19</sup> Interaction Process Analysis, p. 10.

<sup>20</sup> Ibid., p. 128.



action leads to the development of a social structure and role differentiation within the group. This differentiation proceeds along four dimensions: differential degree of access to resources, control over persons, status in a stratified scale of importance or prestige, and solidarity or identification with the group.<sup>21</sup>

Two roles which develop are of particular significance to this study.<sup>22</sup> A task specialist emerges who represents the task values of the members of the group. He may be initially liked because he is satisfying some of their needs. But during the process of action he arouses hostility because his prestige is rising, he talks a lot and proposes new ideas to which the group members may have to commit themselves. Hence they withdraw their liking and center it on a social-emotional specialist. He is the one who represents those values disturbed, de-emphasized, repressed and threatened by the emerging task solution. He is less active and reciprocates the positive affect of others.

The two directions of specialization are in the long run complementary and supportive although in the short run they tend to conflict. This makes it difficult for the same man to be the specialist in both dimensions. Bales found that the attributes leadership and guidance

---

<sup>21</sup>Ibid., pp. 74-84.

<sup>22</sup>R. F. Bales and P. E. Slater, "Role Differentiation in Small Decision-Making Groups," Family, Socialization and Interaction Process Analysis, T. Parsons and R. F. Bales, editors (Glencoe, Illinois: The Free Press, 1955), pp. 259-306.



were usually assigned to one of the pair, although occasionally to a third person who best symbolized a weighted combination of the two functions. Of the two specialists, the probability was that leadership and guidance would be assigned to the task leader, although Bales found that if the task specialist is too low in likeability or if the social-emotional specialist is very high on task ability, leadership may be attributed to him.<sup>23</sup>

The role specialization may increase over time. Using laboratory groups who had been given a decision-making problem, Slater found that the probability of the same person being top choice on both ideas and liking decreased significantly with succeeding meetings.<sup>24</sup> His "Idea man" tended to initiate the most action in problem solving areas. His "Best-liked man" tended to be the focus of positive reactions relating to solidarity, tension release and agreement. Slater is most specific about the dichotomy in group functions:

We have found that the most fundamental type of role differentiation in small experimental groups is the divorcing of task functions from social-emotional functions. Presumably, the ideal leader of a small group would be sufficiently skillful and flexible to alternate these types of behavior in such a way as to handle both problems, and maximize his status on all possible dimensions. He would be able to make both an active, striving response to the task and a symphathetic response to the individual needs of group members. He would be a high participator, well-liked, rated high on task ability, and eventually chosen leader.<sup>25</sup>

---

<sup>23</sup> Ibid., pp. 296-299.

<sup>24</sup> P. E. Slater, "Role Differentiation in Small Groups," Small Groups, A. P. Hare, E. F. Borgatta and R. F. Bales, editors (New York: Alfred A. Knopf, 1966), pp. 610-627.

<sup>25</sup> Ibid., pp. 623-4.





Slater found very few individuals who met these specifications. He accounts for this rarity by first of all pointing out the non-compatibility of the task and social-emotional roles. The task specialist arouses negative feelings because he forces those around him to make minor adjustments in their behavior and to continually re-assess their ideas and values in light of the external demands of the task. The social-emotional specialist is the opposite. He is supportive in his responses to the ideas and behavior of those around him, and continually reinforces their dominant values.

Secondly, the rarity of a single individual dominant in both dimensions can be explained by an individual's predisposition to assume a particular role. Slater argues that the best-liked men may have a compulsion to be liked and during their lifetime they have developed the skills necessary to bring this situation about. The task-specialist may assume his role because he can not respond to the needs of others and uses a concentration upon the task as a shield against the ambiguity of human feelings.<sup>26</sup>

A similar differentiation has been observed by Marcus in a study of social workers in a public welfare agency.<sup>27</sup> His interest

---

<sup>26</sup> Ibid., pp. 624-6.

<sup>27</sup> Philip M. Marcus, "Expressive and Instrumental Groups: Toward a Theory of Group Structure," The American Journal of Sociology, 66:1 (July, 1960), pp. 54-59.





was on the influence a supervisor has on the orientation a group adopts, hypothesizing that subordinates of procedure or task-oriented supervisors would form expressive groups; subordinates of group-oriented or best liked supervisors, instrumental groups. The hypothesis was not supported and Marcus focused instead on characteristics of the sociometrically chosen leaders of the four groups studied, two of which were instrumental and two expressive.

Comparisons were made of leaders between groups rather than within groups but nevertheless his findings parallel those of Bales and Slater. Instrumental groups were headed by a task leader who was the most competent worker. His status in the group was determined by his superior knowledge and ability to answer questions, a service that enabled his followers to perform better and advance their own careers. It therefore mattered little in what manner he supplied information; he might be disparaging and curt and the workers would turn elsewhere for agreeable conversation. Only when the worker encounters an especially difficult question would he approach the task leader because it is now worthy of his attention. In terms of Bales's dimensions of role differentiation, it would appear that the task leader emerges as a leader because of his access to resources (his superior competence), his control over persons (his information can assist in advancing careers), and his status in a stratified scale of importance (the social distance between him and other members that discourages interaction except for especially



difficult questions).

The instrumental orientation of the task leader impels members to interact elsewhere, with the "second best" member. He can answer simple questions, is more approachable and acts as a seive or lieutenant for the task leader. It was to this man that most interaction was directed in the instrumental group, and it would appear that he was the social-emotional specialist, although Marcus does not report specifically on this possibility.

Summary. The two key concepts in the Bale's model are that first of all, there is a cyclic nature in group processes alternating between an instrumental-adaptive phase and an expressive-integrative phase, and, secondly, role differentiation among members develops over time. Two roles that emerge are of particular significance: a task leader, dominant during the instrumental phase and a social-emotional-expressive leader, dominant during the expressive phase.

Occasionally a particular individual may emerge dominant in both roles but such cases are rare. The rarity can be explained sociologically, in part, on the basis of non-compatibility of roles. It can also be explained psychologically, in part, on the basis that particular individuals are predisposed to be instrumental or expressive.

When these concepts are applied to task groups in formal organizations, there may be consequences at variance to the traditional practice of assigning unit leaders. The section that follows develops a



dual leadership theory and indicates how this theory has been applied to one of the few organizations in which formal provision for two leaders has been made, that is, the school with its principal and vice-principal.

### Dual Leadership

The basic theory. The basic theory underlying dual leadership derives directly from the preceding section, that is, if small task-oriented groups are to operate efficiently two kinds of leaders are required:

. . . an expressive (or social-emotional) leader, who ranks higher than other actors in such interaction categories as "showing solidarity" and "asking for suggestions;" the other, an instrumental (or task-oriented) leader, who ranks higher than other actors in such categories as "giving suggestions" and "showing disagreement."<sup>28</sup>

The terms instrumental and expressive are not limited to leadership positions. Etzioni defines instrumental more generally as the need to acquire resources, or means, and to allocate them among the various role-clusters in the system; expressive as the need to maintain the integration of the various parts of the system with each other as well as with its normative system.<sup>29</sup> Furthermore, all group members have predispositions to be instrumental or expressive but the extent to which this becomes manifest depends in part upon the situation.

While admitting that it is possible for a single actor with the qualities of the "great man" to be effective in both dimensions, Etzioni

---

<sup>28</sup> Amitai Etzioni, "Dual Leadership in Complex Organizations," American Sociological Review, 30:5, (October 1965), p. 689.

<sup>29</sup> Loc. cit.





argues that such cases are not common because of the two contradictory styles of behavior needed: to be assertive and accommodative simultaneously or in rapid succession. In this respect he is supported by Fiedler<sup>30</sup> who sees it as a choice between increasing the productivity of the group and the quasi-therapeutic one of helping men to adjust, as well as Cartwright and Zander,<sup>31</sup> who see it as a choice between concern for task achievement and concern for group maintenance.

Dual leadership offers, as an alternative, a division in leadership functions between two leaders, one of whom is dominant in task-oriented instrumental activities, the other, in social-emotional-expressive activities.

Dual leadership in formal organizations. One of the basic problems of formal organizations is to reconcile, coordinate, or integrate member needs and goals with organizational requirements and objectives.<sup>32</sup> It has long been recognized that the small work group can be of strategic significance in promoting this end, and consequently the kind of leadership the organization provides for the group can be a major bridge between the individual's motivational and

---

<sup>30</sup> F. E. Fiedler, "Non-Fraternization between Leaders and Followers and its Effects on Group Productivity and Psychological Development," Symposium on Preventive and Social Psychiatry (Washington: Walter Reed Army Institute of Research, 1957), p. 337.

<sup>31</sup> Op. cit., pp. 497-98.

<sup>32</sup> Robert Dubin and others, Leadership and Productivity (San Francisco: Chandler Publishing Company, 1965), p. 71.





normative orientations and those of the organization.<sup>33</sup>

The responsibility for providing this bridge has usually been assigned to a single person, that is, the supervisor or formal leader:

Considerable attention has been devoted to the problem of somehow tying the social power of the informal group to the purposes of the formal organization. A common approach to this integrative problem has been a line of work which essentially proposes that the formal supervisor attempt to assume as well the role of the informal leader.. Commonly, the supervisor is advised to use a democratic (or permissive, or non directive, or group-centered) style of leadership to facilitate high informal rank.<sup>34</sup>

This is a very complex task. In producing organizations, for example, the main concern is with instrumental activities. In this respect it is usual to think of the formal supervisor as being the instrumental leader. But nothing in dual leadership theory demands that the leader in this dimension must occupy a formal position in the organizational hierarchy. The Bank Wiring Room in the Hawthorne plant is an example of a situation in which instrumental activities were controlled by informal leaders.<sup>35</sup> The instrumental-expressive dichotomy, therefore, is not necessarily synonymous with formal-informal relationships.

---

<sup>33</sup> Etzioni, op. cit., p. 691.

<sup>34</sup> Robert T. Golembiewski, "Small Groups and Large Organizations," Handbook of Organization, James G. March, editor (Chicago: Rand McNally and Company, 1965), pp. 113-114.

<sup>35</sup> Amitai Etzioni, "Organizational Control Structure," Handbook of Organizations, James G. March, Editor (Chicago: Rand McNally & Company, 1965), pp. 665-6.



Elsewhere,<sup>36</sup> Etzioni has developed a leader typology in formal organizations on the basis of personal and positional power resources (Figure 1).

		Positional Power	
		+	-
Personal Power	+	Formal Leaders	Informal Leaders
	-	Officers	Followers

FIGURE 1

#### ETZIONI'S TYPOLOGY OF LEADERS

The formal leader in this typology may be instrumental or expressive, but cases in which both styles are vested in the same person may not be common. Thus, the complementary style may be vested elsewhere. If it is with someone backed by positional power, it is with another formal leader. If not, it is with an informal leader. To summarize, either instrumental or expressive leadership, or both, may be vested in formal leaders, informal leaders or distributed between them.

---

<sup>36</sup> Amitai Etzioni, A Comparative Analysis of Complex Organizations (New York: The Free Press of Glencoe, 1961), pp. 89-91.



When both kinds of leadership are vested in formal leaders, it does not automatically assure greater loyalty, but all other things being equal, formal leaders tend to be more loyal to the organization than informal ones.<sup>37</sup> Thus organizations which make provision for both kinds of leadership in their formal structure will have greater control over their participants than those in which both kinds of activities are controlled by informal leaders.

It would seem that Etzioni argues for an organizational structure somewhat different from the traditional line and staff chart in which control moves down the line and the staff functions to advise line officers at various levels of the hierarchy. When the concept of dual leadership is applied to small groups in formal organizations, one of the critical issues is the extent to which it is possible for both types of leadership to be backed by organizational power, that is for both types of leaders to occupy formal positions in the organization's hierarchy. The traditional chart tends to provide for a single officer at each level: president, manager, supervisor, foreman. One of the few organizations approaching Etzioni's model from a structural point of view is that of the moderately small school; large enough to have a vice-principal but still small enough for the principal to have the opportunity for frequent and equal interaction with all staff members.

---

<sup>37</sup> Etzioni, "Dual Leadership in Complex Organizations," Ibid., p. 692.





Dual leadership in schools. A simplified organization chart of the moderately small school is diagrammed in Figure 2.



FIGURE 2

#### ORGANIZATION CHART OF THE MODERATELY SMALL SCHOOL

The solid line connecting the principal and staff represents relations between them as defined by statutory requirements. There is no legal definition of the vice-principal's position, at least not in Alberta schools. The School Act merely states that in schools of three or more teachers a vice-principal may be appointed and in schools of eight or more teachers one must be appointed.<sup>38</sup> His position is relatively unstructured and is therefore represented by the broken lines. As the senior official in the school, the principal is shown above the vice-principal, who in turn, is above the staff.

Thus there is an opportunity for a division of leadership functions to develop between two individuals who have the potential to be formal leaders in the moderately small school. The extent to which this does develop, and the distribution of instrumental and expressive roles between

---

<sup>38</sup> The School Act -- Office Consolidation (Edmonton, Alberta: The Queen's Printer, 1963), Section 370.





the two, will depend in part on situational factors and in part on personal characteristics of the two leaders.<sup>39</sup> Furthermore, those schools in which the principal emerges as the leader in one dimension and the vice-principal in the other may be more efficient in terms of organizational objectives and member satisfaction than those schools where no such emergence occurs.

It would seem that the influence of situational factors would tend to direct the principal toward an instrumental role. Prescriptive directions to him (and to the teacher) in the School Act generally relate to instrumental, task-oriented activities: responsibility for discipline, organization, management, and the improvement of instruction. Generally it is also on the basis of these activities that the principal and the staff are evaluated. In particular cases, some principal might circumvent this instrumentality because they are predisposed to adopt an expressive role but it would seem that the general population of principals, when compared with vice-principals, would more often be the instrumental leaders.

The role of the vice-principal is not as well defined as that of the principal, his responsibilities are not as great, his is not the focus of attention to the same extent as is the principal. A few vice-principals may emerge as instrumental leaders in cases where the vice-principal is

---

<sup>39</sup> Etzioni, op. cit., p. 689.



predisposed to adopt such a role, and situational factors favor its manifestation, but it would appear that he would more likely play an expressive role. He is assisted in doing so by his elite position in the hierarchy and the possibility of mediating instrumental interactions between the principal and staff.

There is a possibility that the instrumental-expressive roles of the principal and vice-principal may be masked because of the nature of collaborative patterns between them. Etzioni argues, other things being equal, that collaboration is more likely when both leaders hold organizational positions because there is support from organizational mechanisms such as rewards, rules, procedures, as well as from shared training, experience and ideology.<sup>40</sup> This is not always the case as, for example, when one of the leaders has recently been recruited from outside, or is more anxious to please his subordinates than to be rewarded by the organization.<sup>41</sup>

The masking of roles may occur when the two leaders are supportive because there may well be congruency between the ultimate outcomes hoped for by both leaders. Their associations with the group will not be perceived as contradictory but rather complementary. Because

---

<sup>40</sup> Loc. cit.

<sup>41</sup> Graham M. Sykes, "The Corruption of Authority Rehabilitation", Social Forces, Vol. 34, 1956, pp. 257 - 262.



both types of needs are being met, group members will be more satisfied and consequently may not be as perceptive of the complementary deficiency in the leader behavior styles of both kinds of leaders. This is, perhaps, especially true for the higher ranking leader because he is the focus of most attention. If he is the instrumental leader and has strong support from his expressive subordinate, he may well be, in fact, deficient in the expressive dimension but group members may not be aware of this because expressive needs are so well taken care of by the expressive leader.

### Summary of the Theory

In summary, dual leadership theory is based on the idea that the small task group can be of great significance in integrating the needs and goals of the individual members in the organization with the requirements and objectives of the organization.

Assuming that there are two basic dimensions in these groups, an instrumental task dimension and an expressive affective dimension, if these groups are to be effective there must be a focal person or leader in each dimension: an instrumental leader and an expressive leader. Furthermore, because the role types are non-compatible and because individuals are predisposed to be instrumental or expressive, cases in which the same person is dominant in both roles will not be common.

In formal organizations the extent to which the group leaders are backed by positional power can have important consequences for the organization because, other things being equal, formal leaders are more





loyal than informal leaders. Most formal organizations make provision for only a single leader at the various levels of the hierarchy. This person is often encouraged to adopt an expressive role in addition to fulfilling his instrumental functions.

The moderately small school is a particular organization where provision has been made for the emergence of two leaders backed by organizational power. In such schools, it would appear that the principal would be the instrumental leader because of the influence of situational factors, although this instrumentality may be modified by personal characteristics. Alternatively, the extent to which the vice-principal emerges, by default, as the expressive leader can be modified somewhat by his own predisposition to be instrumental or expressive, as well as situational factors.

The extent to which a particular leader is perceived as being instrumental or expressive by group members can be masked by the behavior of the other when patterns of collaboration have become well established. This masking of roles is more likely with the senior member, that is the principal, because he is the person of responsibility and the focus of attention.

Finally, the extent to which a division of leadership functions develops, and the direction of this development, can have important consequences for the school in terms of the school's objectives and satisfaction of its members.



### III. DEFINITION OF TERMS

#### School Types (General)

Three general classifications of school types are referred to in the chapters that follow: school types classified on the basis of some particular attribute of the principal and of the vice-principal separately, and school types classified on the basis of some particular attribute of the principal and vice-principal jointly. In order to make it clear to which of these types reference is being made during the data analysis and subsequent discussion of findings, three general terms relating to school types are introduced at this point:

Major school type. A major school type is one which has been identified on the basis of some particular attribute of the principal.

Minor school type. A minor school type is one which has been identified on the basis of some particular attribute of the vice-principal.

School sub-type. A school sub-type is one which has been identified on the basis of some particular attribute of the principal and vice-principal, jointly.

#### Supervisory Attitude

Supervisory attitude was defined as the principal's (and vice-principal's) attitude to Structure and Consideration. Operational definitions of Structure and Consideration, which measured the principal's (and vice-principal's) predisposition to be instrumental and expressive, are developed in Chapter II under the section entitled Instrumentation.



### School Types (Supervisory Attitude)

The supervisory attitude of the principal was used, as an independent variable, to classify schools into four major types in order to study the second and third problems.

The classification was based on the standing of the principal, of a given school, relative to the median score in each of Structure and Consideration for the total sample of principals. For example, schools where the principal was above the median in Structure were classified as high in this dimension. If the principal was also above the median in Consideration, the school was classified as high in this second dimension as well. Those schools in which the principal was at the median in Structure and/or Consideration were not included in the classification.

The capital letters S and/or C, were used to identify those major types in which the principal was above the median in Structure and/or Consideration. Lower case letters were used to identify those types in which the principal was below the median in Structure and/or Consideration. The four types so formed are summarized as follows:

Major Type SC: principal High in Structure; High in Consideration,

Major Type Sc: principal High in Structure; Low in Consideration,

Major Type sC: principal Low in Structure; High in Consideration,

Major Type sc: principal Low in Structure; Low in Consideration.





A similar method was used to classify schools into four minor types on the basis of the supervisory attitude of the vice-principal. As before, vice-principals who were at the median in Structure and/or Consideration were not included in the classification. These categories were defined as follows:

Minor Type SC: Vice-principal High in Structure; High in Consideration,

Minor Type Sc: Vice-principal High in Structure; Low in Consideration,

Minor Type sC: Vice-principal Low in Structure; High in Consideration,

Minor Type sc: Vice-principal Low in Structure; Low in Consideration.

The sixteen categories of school sub-types formed by combining principal and vice-principal supervisory attitude are summarized in Table I. Each sub-type is identified by means of principal and vice-principal supervisory attitude, in that order. For example, sub-type SCsc consists of schools in which the principal was above the median in both of Structure and Consideration; the vice-principal was below the median in both of Structure and Consideration.

#### Leader Behavior Style

Leader behavior style was defined as the principal's (and vice-principal's) style in the instrumental and expressive leader behavior dimensions. Operational definitions of instrumental and expressive leader behavior are developed in Chapter II under the section entitled





TABLE I

SCHOOL SUB-TYPES CLASSIFIED ON THE BASIS OF SUPERVISORY  
ATTITUDES OF PRINCIPALS AND VICE-PRINCIPALS\*

Sub-Type	Principal's Attitude		Vice-Principal's Attitude	
	Structure	Consideration	Structure	Consideration
SCSC	High	High	High	High
SCSc	High	High	High	Low
SCsC	High	High	Low	High
SCsc	High	High	Low	Low
ScSC	High	Low	High	High
ScSc	High	Low	High	Low
SccS	High	Low	Low	High
Sccs	High	Low	Low	Low
sCSC	Low	High	High	High
sCSc	Low	High	High	Low
sCsC	Low	High	Low	High
sCsc	Low	High	Low	Low
scSC	Low	Low	High	High
scSc	Low	Low	High	Low
sCsC	Low	Low	Low	High
scsc	Low	Low	Low	Low

\* - "High" refers to an attitude score above the median.

- "Low" refers to an attitude score below the median.



Instrumentation.

### School Types (Leader Behavior Style)

The leader behavior style of the principal was used, as the independent variable, to classify schools into four major types in order to study problems four and five.

The method used for classification was similar to that used for classifying schools on the basis of supervisory attitude. The capital letters, I and/or E, were used to identify those major types in which the principal was above the median in instrumental and/or expressive leader behavior. Lower case letters were used to identify those types in which the principal was below the median in instrumental and/or expressive leader behavior. Those schools in which the principal was at the median in instrumental leader behavior and/or expressive leader behavior were not included in the classification.

The four types of schools so formed are summarized as follows:

- Major Type IE: Principal High in instrumental leader behavior;  
High in expressive leader behavior,
- Major Type Ie: Principal High in instrumental leader behavior;  
Low in expressive leader behavior,
- Major Type iE: Principal Low in instrumental leader behavior;  
High in expressive leader behavior,
- Major Type ie: Principal Low in instrumental leader behavior;  
Low in expressive leader behavior.

A similar method was used to classify schools into four minor types on the basis of the vice-principal's leader behavior styles. These



types are summarized as follows:

- Minor Type IE: Vice-principal High in instrumental leader behavior; High in expressive leader behavior,
- Minor Type Ie: Vice-principal High in instrumental leader behavior; Low in expressive leader behavior,
- Minor Type iE: Vice-principal Low in instrumental leader behavior; High in expressive leader behavior,
- Minor Type ie: Vice-principal Low in instrumental leader behavior; Low in expressive leader behavior.

The sixteen categories of school sub-types formed by combining principal and vice-principal leader behavior style are summarized in Table II. Each sub-type is identified by means of principal and vice-principal leader behavior style, in that order. For example, sub-type IEie consists of schools in which the principal was above the median in both of instrumental and expressive leader behavior; the vice-principal was below the median in both of instrumental and expressive leader behavior.

#### IV. THE RESEARCH HYPOTHESES

Hypotheses dealing with the relationships between leader position and leader behavior (problem 1).

1. There will be significant differences in instrumental leader behavior between principals and vice-principals.
2. There will be significant differences in expressive leader behavior between principals and vice-principals.





TABLE II

SCHOOL SUB-TYPES CLASSIFIED ON THE BASIS OF LEADER  
BEHAVIOR STYLES OF PRINCIPALS AND  
VICE-PRINCIPALS\*

Sub-type	Principal's Leader Behavior Style		Vice-Principal's Leader Behavior Style	
	Instrumental	Expressive	Instrumental	Expressive
IEIE	High	High	High	High
IEIe	High	High	High	Low
IEiE	High	High	Low	High
IEie	High	High	Low	Low
IeIE	High	Low	High	High
IeIe	High	Low	High	Low
IeiE	High	Low	Low	High
Ieie	High	Low	Low	Low
iEIE	Low	High	High	High
iEIe	Low	High	High	Low
iEiE	Low	High	Low	High
iEie	Low	High	Low	Low
ieIE	Low	Low	High	High
ieIe	Low	Low	High	Low
ieiE	Low	Low	Low	High
ieie	Low	Low	Low	Low

\* - "High" refers to a leader behavior score above the median.

- "Low" refers to a leader behavior score below the median.



Hypotheses dealing with the relationships between supervisory attitude and leader behavior (problem 2).

3. There will be significant differences in instrumental leader behavior among principals of the four major types of schools classified on the basis of supervisory attitude.

4. There will be significant differences in expressive leader behavior among principals of the four major types of schools classified on the basis of supervisory attitude.

5. There will be significant differences in instrumental leader behavior among vice-principals of the four minor types of schools classified on the basis of supervisory attitude.

6. There will be significant differences in expressive leader behavior among vice-principals of the four minor types of schools classified on the basis of supervisory attitude.

Hypotheses dealing with relationships between principal-vice-principal combinations of supervisory attitudes and leader behavior of principals and vice-principals (problem 3).

7. There will be significant differences in instrumental leader behavior among principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

8. There will be significant differences in expressive leader behavior among principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

9. There will be significant differences in instrumental leader



behavior among vice-principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

10. There will be significant differences in expressive leader behavior among vice-principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

Hypotheses dealing with relationships between different combinations of leader behavior styles and teacher satisfaction (problem 4).

11. There will be significant differences in expressed teacher satisfaction with the professional stimulation, assistance and direction provided by the principal and vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

12. There will be significant differences in expressed teacher satisfaction with personal and social relationships with the principal and vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

13. There will be significant differences in expressed teacher satisfaction with working conditions generally among the sixteen sub-types of schools classified on the basis of leader behavior styles.

14. There will be significant differences in expressed teacher satisfaction with the social climate generally among the sixteen sub-types of schools classified on the basis of leader behavior styles.

15. There will be significant differences in expressed teacher





satisfaction, all things considered, among the sixteen sub-types of schools classified on the basis of leader behavior styles.

Hypotheses dealing with relationships between different combinations of leader behavior styles and effectiveness of the leadership (problem 5).

16. There will be significant differences in teacher assessment of the effectiveness of the principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

17. There will be significant differences in teacher assessment of the effectiveness of the vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

18. There will be significant differences in teacher assessment of the effectiveness of the principal and vice-principal acting as a team among the sixteen types of schools classified on the basis of leader behavior styles.





## CHAPTER II

### RESEARCH PROCEDURES

#### I. DELIMITATIONS

##### The Leader Behavior of the Formal Leaders

One of the major delimitations in this study relates to the concepts of leaders and leadership. Both of these terms have appeared in the literature in a variety of ways and several writers have commented on the generally unsatisfactory state at present in their use. Bennis,<sup>1</sup> for example, states that leadership theory is the most hazy and confounding area in social psychology, Katz and Kahn<sup>2</sup> claim there is no close agreement on a conceptual definition of leadership or on the theoretical significance of the leadership process.

The confusion surrounding the concepts of leader and leadership have concerned many others. Put succinctly by Janda, it results from "a delusion of sufficiency and confusion by similarity." Janda details four faults characteristic of much of the literature on leadership: 1) there is little comparability between studies because they are often based on differing ideas about leadership, 2) many leadership studies actually

---

<sup>1</sup> Warren G. Bennis, "Leadership Theory and Administrative Behavior: The Problem of Authority," Administrative Science Quarterly, 4, December, 1959, p. 263.

<sup>2</sup> Daniel Katz and R. L. Kahn, The Social Psychology of Organizations (New York: John Wiley and Sons, Inc., 1966), pp. 300-301.



relate to group processes, 3) there is a dubious distinction between leadership and headship, 4) the tendency to treat leadership as a totally unique phenomenon.<sup>3</sup>

Golembiewski reaches similar conclusions but he extends the analysis in two important details.<sup>4</sup> First, he notes that approaches to leadership have tended to be bi-polar with, at the one extreme, the leader being the particular member in a small group who contributes most to its progress, and at the other extreme, the leader being the occupant of a high-level position in formal hierarchies. In this context, Fiedler's criteria in delimiting the leader are useful. He specified the leader as the individual who meets one of the following:

... (a) he was appointed by a representative of the larger organization; (b) he was elected by the group; (c) if there is neither an elected nor an appointed leader, he is the individual who can be identified as most influential ...<sup>5</sup>

Second, Golembiewski claims that early studies failed to make a distinction between leader studies and leadership studies. Leader

---

<sup>3</sup> K. F. Janda, "Toward the Explication of the Concept of Leadership in Terms of the Concept of Power," Human Relations, 13:4, 1960, pp. 345-363.

<sup>4</sup> Robert T. Golembiewski, The Small Group (Chicago: The University of Chicago Press, 1962), p. 129.

<sup>5</sup> Fred E. Fiedler, "A Contingency Model of Leader Effectiveness," Advances in Experimental Social Psychology, L. Berkowitz, editor (New York: Academic Press, 1964), p. 153.



studies focus on the person, while the emphasis on leadership studies is upon a function or process.<sup>6</sup>

Historically, the leader-person concept has guided most research. For many years leadership was thought to result from certain combinations of qualities or traits which were characteristic of some individuals and not of others. The usefulness and contributions from this approach have been assessed by Stogdill,<sup>7</sup> Gibb,<sup>8</sup> Gouldner,<sup>9</sup> and Andrews.<sup>10</sup> Gibb's review is often cited as evidence of the limited value of the trait theory, and in summing up he said this:

A person does not become a leader by virtue of his possession of any particular pattern of personality traits, but the pattern of personal characteristics of the leader must bear some relevant relationship to the present characteristics, activities and goals of the group of which he is the leader.<sup>11</sup>

Gibb, however, is careful to point to abundant evidence that

---

<sup>6</sup> Op. cit., p. 130.

<sup>7</sup> Ralph M. Stogdill, "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, 25, January, 1948, pp. 35-71.

<sup>8</sup> Cecil A. Gibb, "Leadership" Handbook of Social Psychology, Gardner Lindzey, editor (Reading, Mass.: Addison-Wesley Publishing Company, Inc., 1954), pp. 877-920.

<sup>9</sup> Alvin W. Gouldner, Studies in Leadership, (New York: Russell and Russell, 1965), pp. 21-25.

<sup>10</sup> J. H. M. Andrews, "Recent Research in Leadership," Canadian Education 13:4, September 1958, pp. 15-24.

<sup>11</sup> Op. cit., p. 889.







member personalities do make a difference to group performance, and hence by extension, leader personality may also be significant.<sup>12</sup> Fiedler, for one, is a modern advocate of the trait theory. Failure in the past, he believes, has been due to inadequate assumptions, and in particular confusion between leaders-followers and effective-ineffective leaders. When the focus is on the latter, the problem becomes restricted to individuals who are in a position to influence their groups and conditions are thereby provided for behavior relevant to particular traits to become manifested and to be studied in a meaningful way.<sup>13</sup>

Restricting the leader to the individual in the group who meets one of Fiedler's criteria above also helps to resolve confusion inherent in the comparative use of the terms "headship" and "leadership." In passing, it is noteworthy that Fiedler has stated his criteria for the leader such that they are mutually exclusive. Elsewhere<sup>14</sup> he recognizes the need and possibility of two group leaders. His third criteria could be modified to accommodate this without changing the value of the first two, viz., the appointed-elected distinction. This distinction helps to clear some of the confusion Golembiewski attributes above to the bi-polar

---

<sup>12</sup> Loc. cit.

<sup>13</sup> Fred E. Fiedler, "Leadership and Leadership Effectiveness Traits: A Reconceptualization of the Problem," Leadership and Interpersonal Behavior, L. Petrullo and D. M. Bass, editors (New York: Holt, Rinehart and Winston, 1961), p. 181.

<sup>14</sup> Symposium on Preventive and Social Psychiatry.



approaches to leadership studies.

In particular, when the leader has been appointed by the larger organization, of which the group is a part, the distinction between leadership and headship becomes redundant. Gibb differentiates the two concepts by means of relations existing between the "leader" and the group: headship is maintained through organized system rather than spontaneous recognition; the group goal is determined by the head man and there is little sense of shared feeling or joint action in pursuit of the goal; there is a wide social gap between the head and group members. Most basically, the two forms differ with respect to the source of authority exercised: the leader's authority is spontaneously accorded him by fellow group members; the head derives from some extra-group power.<sup>15</sup>

It would appear that the leadership-headship labels have been introduced to avoid other labels such as the effective-ineffective leader which may carry normative connotations.<sup>16</sup> But the usefulness of the distinction is questionable and may well be self-defeating. Gibb, himself, with reference to the relationships between group members and the head uses such phrases as "on pain of punishment" and "with all the punishments that would involve."<sup>17</sup> Furthermore, on the basis of Gibb's differentiation, certain types of organizations, such as prisons, must be and remain

---

<sup>15</sup> Gibb, op. cit., p. 882.

<sup>16</sup> Janda, op. cit., pp. 352-353.

<sup>17</sup> Gibb, loc. cit.



leaderless. Others, such as our schools, are inherently structured for headship. Gibb recognizes that heads by their, "... positive contributions to group progress ... are therefore accorded willing cooperation and, through it, leadership status."<sup>18</sup>, implying that leadership is on a somewhat higher plane.

Although the terms leadership and headship may not be mutually exclusive, their use does imply considerable polarization when, in fact, the dichotomy is not as sharp as is frequently claimed.<sup>19</sup> Use of the effective-ineffective concept does not imply this polarization, at least not to the same degree. In its most general application, the concept implies that occupants in a leadership position will display different styles of behavior ranging along a continuum. Thus, as Halpin observes, a focus on leader behavior will eliminate some of the confusion inherent in many "leadership" studies and greatly increase our understanding of leadership phenomena.<sup>20</sup>

The focus in this study is therefore delimited to that of the leader behavior of the two formal leaders in the school -- the principal and vice-principal.

#### School Size and Geographic Location

This study was delimited to public schools within the Province of

---

<sup>18</sup> Loc. cit.

<sup>19</sup> Janda, op. cit., p. 352.

<sup>20</sup> Andrew W. Halpin, Theory and Research in Administration (New York: The MacMillan Company, 1966), pp. 81-86.





Alberta. School size was delimited to those schools having a staff, including the principal and vice-principal, composed of not less than eight nor more than fourteen members. The lower limit was determined by statutory requirements; vice-principals are not required until there are at least eight staff members. The selection of an upper limit of fourteen was somewhat ad hoc but was influenced by the researcher's desire to keep staff size small enough to enable the principal and vice-principal to have the opportunity for frequent and equal interaction with all staff members. An added reason for an upper limit of fourteen was the delimitation to those schools that had one, and only one, vice-principal. Even at this level some schools could not qualify for the sample because they had two vice-principals.

## II. ASSUMPTIONS AND LIMITATIONS

### Assumptions

1. The theory on which this study is based has been developed, to a major extent, from studies of experimentally-created task-oriented groups. Is it reasonable to assume that the results of such studies can be applied generally to natural groups within formal organizations?

Etzioni believes that earlier efforts at integrating "the insights and findings of small group studies in the Kurt Lewin and Elton Mayo traditions." have been successful, and suggests that the time may now be ripe for another effort to integrate small group analysis with that of





formal organizations.<sup>21</sup>

Starbuck has suggested that relationships between group size and participation discovered by Bales in experimental groups may generalize to voluntary organizations.<sup>22</sup> The study by Marcus<sup>23</sup> cited in Chapter I offers even more direct empirical support for the assumption. The relevant aspect of his report relates to the setting for the study: a group of social workers in a large public welfare agency. Not only was this a natural group, but it was a group not unlike the group proposed in this study in that in both cases task activities of group members are usually with clients in isolation from other group members. Of special significance was his discovery of a tendency for two different types of focal actors to emerge which he identified as a task leader and a social-emotional leader.

2. It is assumed that the Structure and Consideration scores obtained by the use of the Leadership Opinion Questionnaire<sup>24</sup> provide

---

<sup>21</sup> Amitai Etzioni, "Dual Leadership in Complex Organizations," American Sociological Review, 30:5, October, 1965, p. 688.

<sup>22</sup> William H. Starbuck, "Organizational Growth and Development," Handbook of Organizations, James G. March, editor (Chicago: Rand McNally & Company, 1965), p. 461.

<sup>23</sup> P. M. Marcus, "Expressive and Instrumental Groups: Toward a Theory of Group Structure," American Journal of Sociology, 66:1, July 1960. pp. 54-59.

<sup>24</sup> For a description of this instrument see the section entitled Instrumentation below.



satisfactory and reliable measures of an individual's predisposition to be instrumental and expressive.

3. It is assumed that the instrumental leader behavior and the expressive leader behavior of the principals and vice-principals can be measured by the analysis of questionnaires completed by the teachers.

4. It is assumed that the sample methods used in this study provided a random representation of the population.

5. It is assumed that the statistics collected in this study can be analysed by use of parametric techniques.

### Limitations

A major limitation of this study is that it is concerned only with the leader behavior of the two formal leaders in the school. The study is further limited by the extent to which the instruments provide a complete measure of instrumental and expressive leader behavior.

A second limitation is that leader dyads only were studied. There are schools in which provision has been made for other leaders in the formal hierarchy, such as additional vice-principals and department heads. Such schools were excluded. Generalizations from this study should therefore be extended beyond the population only with caution.



### III. INSTRUMENTATION

#### Instrumental and Expressive Leader Behavior

The major instrument used in this study was an adaptation of the Leader Behavior Description Questionnaire -- Form XII (hereinafter called the LBDQ-XII) used to measure the instrumental leader behavior and expressive leader behavior of principals and vice-principals.

The LBDQ-XII is the result of a continuing study of leadership conducted by the Ohio State Leadership Studies group for well over a decade now. Their approach has been to first of all define leadership in terms of the behavior of an individual when he is directing the activities of a group toward a goal and, secondly, on how the individual behaves in selected categories of behavior in directing group activities.<sup>25</sup>

Initially, nine categories of behavior were posited and these provided a framework for the collection of specific items of leader behavior and the development of a preliminary questionnaire. Responses to this questionnaire were factor analysed, yielding three factors. These the researchers identified as Maintenance of Membership, Objective Attainment Behavior and Group Interaction Facilitation Behavior.<sup>26</sup>

---

<sup>25</sup> J. K. Hemphill and A. E. Coons, "Development of the Leader Behavior Description Questionnaire," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors (Columbus: Bureau of Business Research, The Ohio State University, 1957), p. 8.

<sup>26</sup> Ibid., pp. 25-27.





This preliminary form of the LBDQ was further modified by Halpin and Winer for a study of leader behavior in aircraft bomber crews.<sup>27</sup> The major modification, besides minor ones in terminology and instructions, was a reduction in the number of dimensions used to eight. A factor analysis of this modified form revealed four major factors which were identified as Consideration, Initiation of Structure, Production Emphasis and Sensitivity (Social Awareness). The first two of these factors, Consideration and Initiation of Structure, together accounted for 83.2 per cent of the common variance, the other two 16.8 per cent. On the basis of the factor analysis Halpin and Winer attempted to construct a short form of the LBDQ consisting of four subtests.<sup>28</sup> This form consisted of Consideration (15 items), Initiating Structure (15 items), Production Emphasis (25 items) and Social Awareness (25 items). The extra items on the last two subtests, it was hoped, would build up these scales, but the researchers were not successful in doing so. Production Emphasis and Social Awareness continued to make only a minor contribution to the total factor variance and it was on this basis that Halpin developed the two dimensional LBDQ in 1957.<sup>29</sup>

---

<sup>27</sup> A. W. Halpin and B. J. Winer, "A Factorial Study of the Leader Behavior Descriptions, "Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors (Columbus: Bureau of Business Research, The Ohio State University, 1957), pp. 39-51.

<sup>28</sup> Ibid., pp. 46-50.

<sup>29</sup> A W. Halpin, Manual for the Leader Behavior Description Questionnaire (Columbus: Bureau of Business Research, The Ohio State University, 1957).



The LBDQ-XII. Even though the LBDQ (1957 edition) appeared with only the dimensions of Consideration and Initiating Structure of consequence, Halpin recognized that this did not imply necessarily lesser importance for the other two factors, Production Emphasis and Social Awareness, since the original questionnaire may not have contained adequate samples of behavior from the areas tapped by these two factors.<sup>30</sup>

Within this context, Stogdill's prefatory remarks on the LBDQ-XII are more meaningful:

It did not seem reasonable to believe that two factors are sufficient to account for all the observable variance in leader behavior. However, as Shartle observed, no theory was available to suggest additional factors. A new theory of role differentiation and group achievement by Stogdill, and the survey of a large body of research data that supported that theory, suggested that a member (sic) of variables operate in the differentiation of roles in social groups. Possible factors suggested by the theory are the following: tolerance of uncertainty, persuasiveness, tolerance of member freedom of action, predictive accuracy, integration of the group, and reconciliation of conflicting demands. Possible new factors suggested by the results of the empirical research are the following: representation of group interests, role assumption, production emphasis, and orientation toward superiors.<sup>31</sup>

Consequently Stogdill reduced the number of items measuring initiating structure and consideration from fifteen to ten (using nine of the original items in each case), and added on new scales, in the one

---

<sup>30</sup> Halpin, op. cit., p. 43.

<sup>31</sup> R. M. Stogdill, Manual for the Leader Behavior Description Questionnaire - Form XII (Columbus: Bureau of Business Research, The Ohio State University, 1963).



case seven,<sup>32</sup> in another nine,<sup>33</sup> and eventually ten new subscales in addition to initiating structure and consideration.

Stogdill reports reliabilities of the subscales of the LBDQ-XII ranging from a low of 0.38 to a high of 0.91 with a median of 0.78 and a mode of 0.84.<sup>34</sup>

Two aspects in the development of the LBDQ-XII are indicative of its validity. The instrument is the culmination of studies carried on at the Bureau of Business Research since 1946. Its direct validity, that is the extent to which it is based on rational analysis and professional judgment,<sup>35</sup> can be gauged on this basis. Its derived validity, that is the extent to which it is based on empirical and statistical evidence,<sup>36</sup> can be gauged by the degree to which the items of the subtests are suited to the underlying explanatory concepts of the subscales. Stogdill does not supply any statistical evidence by which the derived validity of the final LBDQ-XII can be gauged, but earlier he presents a factor analysis of

---

<sup>32</sup> R. M. Stogdill, O. S. Goode and D. R. Day, "The Leader Behavior of United Senators," Journal of Psychology, 56, 1963, pp. 3-8.

<sup>33</sup> R. M. Stogdill and O. S. Goode, "The Leader Behavior of Corporation Presidents," Personnel Psychology, 16, 1963, pp. 127-132.

<sup>34</sup> Manual for the Leader Behavior Description Questionnaire -- Form XII.

<sup>35</sup> R. L. Ebel, Measuring Educational Achievement (Englewood Cliffs: Prentice Hall Inc., 1965), p. 381.

<sup>36</sup> Loc. cit.







the preliminary 11-scale form which generally shows that each subscale "is strongly weighted on a separate factor, with other subscales showing only low loadings on the factor."<sup>37</sup>

The measurement of instrumental leader behavior and expressive leader behavior.

With respect to social systems generally, Etzioni defines instrumental as the need to acquire resources, or means and to allocate them among the various role clusters of the system; expressive as the need to maintain the integration of the various parts of the system with each others as well as with the normative system.<sup>38</sup> Elsewhere, he says that instrumental activities deal with the input of means into the organization and their distribution within it; expressive activities affect interpersonal relations within the organization and the adherence to norms by organization participants.<sup>39</sup> These activities are similar to the kind of member behavior cited by Cartwright and Zander characteristic of goal achievement and group maintenance: initiates action, keeps member attention on goals, clarifies issues, plans, evaluates and supplies expert opinion in the area of goal achievement; and keeps interpersonal relations pleasant, arbitrates disputes, encourages, gives the minority a chance,

---

<sup>37</sup> Stogdill and Goode, "The Leader Behavior of Corporation Presidents," pp. 131.

<sup>38</sup> "Dual Leadership in Complex Organizations."

<sup>39</sup> Amitai Etzioni, "Organizational Control Structure," Handbook of Organizations, James G. March, editor (Chicago: Rand McNally & Company, 1965), p. 660.



stimulates self-direction and increase interdependence of members in the area of group maintenance.<sup>40</sup>

Cartwright and Zander clearly imply that there is a close parallel between their dimensions of goal achievement and group maintenance and the concepts of initiation of structure and consideration developed by Halpin and Winer.<sup>41</sup> The distinction is that consideration and initiation of structure are leader behavior styles dealing with each of these functions respectively:

Items with high positive loadings on "consideration" were associated with behavior indicative of friendship, mutual trust, respect, and a certain warmth between the leader and his group. Items with a high positive loading on "initiating structure" were associated with behavior on the part of the leader which tends to define the role which he expects each member to assume, and which seeks to establish well-defined patterns of organization, channels of communication, and ways of getting the job done. It is interesting to note ... two minor factors ... appear also to reflect the two basic functions of goal achievement and group maintenance ...<sup>42</sup>

From this, it would appear that two of the LBDQ-XII subtests in particular deal with the instrumental-goal achievement-initiating structure dimension and two in particular deal with the expressive-group maintenance-consideration dimension. A review of the definitions and the items which constitute the Production Emphasis and Initiation

---

<sup>40</sup> Dorwin Cartwright and Alvin Zander, Group Dynamics (New York: Row, Peterson and Co., 1960), p. 496.

<sup>41</sup> Op. cit.

<sup>42</sup> Cartwright and Zander, op. cit., p. 497.



of Structure subtests indicates that they relate to behavior in the instrumental domain, whereas Consideration and Tolerance of Freedom relate to the expressive domain.<sup>43</sup> Consequently, instrumental leader behavior was defined operationally as the combined rating obtained on the LBDQ-XII subtests Production Emphasis and Initiation of Structure; expressive leader behavior was defined operationally as the combined rating obtained on the LBDQ subtests Consideration and Tolerance of Freedom.

In order to test this reasoning, a study was made of the interrelations existing among the subtests of the LBDQ-XII on the basis of actual data dealing with the leader behavior of principals in Alberta Schools. Brown has recently reported a correlation matrix based on the leader behavior ratings of 170 principals.<sup>44</sup> Miklos has also developed a similar matrix based on approximately 50 principals.<sup>45</sup>

By means of a principal-component analysis, two factors, together accounting for three-quarters of the variance associated with leader behavior, were extracted from each of the matrices. These factors were then rotated by means of a varimax solution in order to

---

<sup>43</sup> Stogdill, Manual for the Leader Behavior Description Questionnaire - Form XII.

<sup>44</sup> A. F. Brown, "Reactions to Leadership," A Paper for the Fourth Canadian Conference on Educational Research, Toronto, 1966.

<sup>45</sup> E. Miklos, "Leader Behavior Survey: 1966 Principals Leadership Conference," Unpublished Manuscript.





maximize the loadings on one factor, leaving the loading on the other factor at or near zero.<sup>46</sup> The factors for the Brown data are presented in Table III, for the Miklos data in Table IV.

A comparison of the factor loadings in the principal-component analysis and the varimax rotated analysis indicates that the effect of the varimax rotation was to maximize the loadings of some of the tests on Factor I, of others on Factor II, and of some on neither factor. In particular, subscales 1, 5, and 9 tend to indicate high loadings on Factor I' and low loadings on Factor II'; subscales 3, 6, and 8 tend to indicate low loadings on Factor I' and high loadings on Factor II'; subscales 2, 4, 7, 10, 11, and 12 tend to have intermediate ratings on both Factors I' and II'.

Subscales 5 and 9 are the Initiation of Structure and Production Emphasis subscales. There is a distinct difference in factor loading between these two subscales and subscales 6 and 8 which are the Tolerance of Freedom and Consideration dimensions. As instrumental leader behavior was defined as the combined ratings of the Initiation of Structure and Production Emphasis subscales, and expressive leader behavior was defined as the combined ratings on the Consideration and Tolerance of Freedom subscales, the factor analysis adds weight to the theoretically derived basis for contending the two definitions measure independent dimensions of leader behavior.

---

<sup>46</sup> W. W. Cooley and P. R. Lohnes, Multivariate Procedures for the Behavioral Sciences (New York: John Wiley and Sons, Inc., 1962), p. 151-4.



TABLE III  
FACTOR LOADINGS -- BROWN DATA

Sub-scale	Principal-Component Factors		Varimax Rotated Factors		Communalities
	I	II	I'	II'	
1	-0.695	-0.400	0.781	0.179	0.643
2	-0.872	0.193	0.508	0.735	0.798
3	-0.502	0.714	-0.118	0.865	0.761
4	-0.822	-0.176	0.723	0.430	0.707
5	-0.726	-0.533	0.894	0.103	0.810
6	-0.637	0.567	0.081	0.849	0.728
7	-0.850	-0.217	0.770	0.419	0.769
8	-0.796	0.433	0.288	0.859	0.821
9	-0.551	-0.685	0.870	-0.127	0.773
10	-0.881	0.044	0.616	0.632	0.779
11	-0.917	0.081	0.617	0.683	0.848
12	-0.767	0.034	0.539	0.547	0.590

Key to subscales:

1. Representation
2. Demand Reconciliation
3. Tolerance of Uncertainty
4. Persuaviness
5. Initiation of Structure
6. Tolerance of Freedom
7. Role Assumption
8. Consideration
9. Production Emphasis
10. Predictive Accuracy
11. Integration
12. Superior Orientation



TABLE IV

## FACTOR LOADINGS -- MIKLOS DATA

Sub-scale	Principal-Component Factors		Varimax Rotated Factors		Communalities
	I	II	I'	II'	
1	-0.444	0.522	0.682	-0.059	0.469
2	-0.905	-0.157	0.534	0.748	0.845
3	-0.634	-0.618	0.017	0.886	0.784
4	-0.760	0.354	0.790	0.282	0.703
5	-0.777	0.416	0.845	0.250	0.777
6	-0.622	-0.676	-0.032	0.918	0.844
7	-0.866	0.216	0.782	0.469	0.831
8	-0.797	-0.476	0.233	0.899	0.862
9	-0.531	0.573	0.781	-0.035	0.611
10	-0.899	-0.031	0.618	0.654	0.809
11	-0.873	-0.105	0.548	0.689	0.774
12	-0.785	0.171	0.679	0.430	0.646

Key to subscales:

1. Representation
2. Demand Reconciliation
3. Tolerance of Uncertainty
4. Persuasiveness
5. Initiation of Structure
6. Tolerance of Freedom
7. Role Assumption
8. Consideration
9. Production Emphasis
10. Predictive Accuracy
11. Integration
12. Superior Orientation





The factor analysis also points to the possibility of expanding the definitions of instrumental and expressive leader behavior to include, respectively, subscale 1 (Representation) which also loads high on Factor I', and subscale 3 (Tolerance of Uncertainty) which also loads high on Factor II'. After due deliberation, however, the researcher concluded this was not feasible.

In the first place, re-examination of the items in subscale 1 indicates that this subscale deals with behavior of the leader not directly related to the group, but on behalf of, or as agent for the group: he acts as spokesman for the group, he publicizes the activities of the group, he speaks for the group at outside meetings.<sup>47</sup> These items can be compared with the following items selected from subscales 5 and 9: he lets group members know what is expected, he asks members to follow standard rules, he needles members for greater effort, he asks the members to work harder.<sup>48</sup> These items deal directly with group members whereas those of subscale 1 are of a more indirect nature. Furthermore, the communalities, in both cases, for subscale 1 are relatively low indicating that a considerable portion of the variance associated with subscale 1 remains unaccounted for by the first two factors.

There is a similar difference in the nature of the items between

---

<sup>47</sup> R. M. Stogdill, Manual for the Leader Behavior Description Questionnaire -- Form XII (Columbus: Bureau of Business Research, The Ohio State University, 1963).

<sup>48</sup> Loc. cit.



subscale 3 (Tolerance of Uncertainty) and subscales 6 (Tolerance of Freedom) and 8 (Consideration). The items which constitute subscale 3, such as he waits patiently, he remains calm, he accepts defeat and delay in stride,<sup>49</sup> are more indicative of personal characteristics of the individual rather than leader-group interactions. Conceivably these characteristics could relate to the social-emotional, group maintenance, expressive dimension but the relationship is indirect, whereas the items in subscales 6 and 8 deal more directly with leader-group interactions: he allows members complete freedom, he allows the group a high degree of initiative, he does little things for the group, he treats group members as equals.<sup>50</sup>

Thus although the statistical evidence for expanding the definitions was encouraging, it was decided that the prudent course would be to remain with the a priori definitions of both instrumental and expressive leader behavior.

The teacher questionnaire which contains the items used to measure instrumental and expressive leader behavior is presented in Appendix B.

### Supervisory Attitude

Supervisory attitude was measured by means of the Leadership

---

<sup>49</sup> Loc. cit.

<sup>50</sup> Loc. cit.



Opinion Questionnaire (hereinafter called the LOQ), an instrument completed by the principals and vice-principals. A copy of this questionnaire is presented in Appendix C.

The LOQ measures two dimensions of supervisory leadership which are defined as follows:

Structure - (S). Reflects the extent to which an individual is likely to define and structure his own role and those of his subordinates toward goal achievement. A high score on this dimension characterized individuals who play a more active role in directing group activities through planning, communicating information, scheduling, criticizing, trying out new ideas, etc.

Consideration - (C). Reflects the extent to which an individual is likely to have job relationships characterized by mutual trust, respect for subordinates' ideas, consideration of their feelings, and a certain warmth between supervisor and subordinates. A high score is indicative of a climate of good rapport and two-way communication. A low score indicates the supervisor is likely to be more impersonal in his relations with group members.<sup>52</sup>

The definitions of Structure and Consideration appear to be sufficiently similar to the instrumental and expressive concepts of dual leadership to warrant their use as measures of the leader's propensity to be instrumental or expressive or both.

Like the LBDQ, the LOQ is also an outgrowth of the Ohio Leadership Studies and is a parallel development to Fleishman's Supervisory Behavior Description Questionnaire, which, in turn, is an

---

51

Edwin A. Fleishman, Leadership Opinion Questionnaire (Chicago: Science Research Associates, 1960).

52

Edwin A. Fleishman, Manual for the Leadership Opinion Questionnaire (Chicago: Science Research Associates, 1960), p.3.





adaptation to industrial settings of the LBDQ.<sup>53</sup> The purpose of the LOQ is best expressed in Fleishman's words. "No less important than the description of leadership behavior is the assessment of leadership attitudes."<sup>54</sup>

The LOQ was developed in a manner similar to that used for the LBDQ. A preliminary questionnaire was administered to a sample of one hundred foremen who were asked to indicate how frequently they should do what each item described:

The items in this questionnaire were generally parallel to those in the pretest form of the Supervisory Behavior Description ... except these items were worded in terms of "what should you, as a supervisor, do?", "rather than in terms of "what does your own supervisor actually do?".<sup>55</sup>

The responses were factor analysed and on this basis a revised questionnaire with items constituting the two dimensions, Structure and Consideration, was constructed:

It should be noted that 18 of the 20 items in the "Consideration" key and 16 of the 20 items in the "Structure" key have parallel items on the Supervisory Behavior Description. It was not possible to select all the items from parallel items since the response distribution of certain items tended to be more

---

<sup>53</sup> E. A. Fleishman, "A Leader Behavior Description for Industry," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors (Columbus: Bureau of Business Research, The Ohio State University, 1957), pp. 103-119.

<sup>54</sup> E. A. Fleishman, "The Leadership Opinion Questionnaire," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors (Columbus: Bureau of Business Research, The Ohio State University, 1957), p. 120.

<sup>55</sup> Ibid., p. 121.



skewed when the foremen used it to describe their own attitudes than in cases where they used it to describe the behavior of someone else.<sup>56</sup>

The validity of the LOQ can be gauged in part on the basis that it, like the LBDQ, is a product of the Ohio Leadership Studies, and in part on Fleishman's comments:

The principal value of the LOQ, with regard to validity, is in its construct validity. The two dimensions measured by the questionnaire were developed by factor analysis procedures and item analysis was carried out to provide homogeneous measures of Consideration and Structure.<sup>57</sup>

The LOQ has been used by Litzinger in a study comparing leadership attitudes of the managers of centralized and decentralized banks.<sup>58</sup> He found greater variations among the decentralized managers who were also higher in Consideration. There were, however, no significant differences in their Structure scores. The instrument has also been used by Bass in studies dealing with the prediction of success of production supervisors<sup>59</sup> and sales supervisors<sup>60</sup>. Fleishman reports a study dealing

---

<sup>56</sup> Ibid., pp. 121-123.

<sup>57</sup> Manual for the Leadership Opinion Questionnaire, p. 7.

<sup>58</sup> W. D. Litzinger, "Entrepreneurial Prototype in Bank Management: A Comparative Study of Branch Bank Managers", Doctoral dissertation, University of Southern California, 1962 cited by E. A. Fleishman, Recent Results on the Validity of the Leadership Opinion Questionnaire (Chicago: Science Research Associates, 1963), pp. 5-6.

<sup>59</sup> B. M. Bass, "Leadership Opinions as Forecasters of Supervisory Success," Journal of Applied Psychology, 40, 1956, pp. 345-46.

<sup>60</sup> B. M. Bass, "Leadership Opinions of Forecasts of Supervisory Success: A Replication," Personnel Psychology, 11, 1958, pp. 515-18.



with relationships between the LOQ scores and over-all proficiency ratings of eighty-eight department managers in a shoe-manufacturing company.<sup>61</sup> The correlation between Structure and proficiency was 0.61; between Consideration and proficiency, 0.43.

Fleishman reports reliability estimates of the Structure dimension ranging from 0.67 to 0.88 with a median value of 0.795, and of the Consideration dimension ranging from 0.62 to 0.89 with a median value of 0.79.<sup>62</sup> The scales are independent of each other, they are not dependent on intelligence or verbal ability nor do they represent a general measure of personality.<sup>63</sup>

The LOQ was used to classify schools into four major types based on the principal's attitude to Structure and Consideration, with four subtypes within each major type based on the vice-principal's attitude to Structure and Consideration. This classification served as the basis for detailed comparisons of instrumental and expressive behavior between principals and vice-principals.

#### Rated Effectiveness and Expressed Satisfaction

Measures of the effectiveness of the two leaders, separately and

---

<sup>61</sup> Recent Results on the Validity of the Leadership Opinion Questionnaire, p. 3.

<sup>62</sup> Ibid., p. 4.

<sup>63</sup> Ibid., pp. 4-6.





jointly, as rated by the teachers and expressions of teacher satisfaction with the job were obtained in order to determine the relationships between these two variables and different combinations of leader behavior styles. The theory argues that the group will be more efficient in terms of goal accomplishment and member satisfaction when it commands both kinds of leaders.<sup>64</sup> Rated effectiveness of the leaders and expressed satisfaction of the teachers may be means to these ends.

Rated effectiveness. The effectiveness of the principal and vice-principal, separately and jointly, was determined by including three questions in the teachers' questionnaire, a copy of which is presented in Appendix B. These questions asked a) how effective do you consider your principal to be in performing all the various functions which he should perform?, b) how effective do you consider your vice-principal to be in performing all the various functions he should perform?, and c) how effective do you consider the principal and vice-principal to be acting as a team?

Expressed satisfaction. Expressed satisfaction was determined by asking for a global rating of satisfaction and two ratings each of satisfaction with areas related to instrumental and expressive activities.

---

<sup>64</sup> Amitai Etzioni, "Dual Leadership in Complex Organizations," American Sociological Review, 30:5, (October, 1965), p. 690.



The use of a global measure of satisfaction was based, in part, on Vroom's observations dealing with the attributes of satisfaction.<sup>65</sup> In reviewing a large number of studies, he found the dimensions most frequently used as a measure of satisfaction to be as follows: attitudes toward the company and its management, promotional opportunities, job content, supervision, financial rewards, working conditions. He also states that these studies have invariably shown a positive intercorrelation between measures of different aspects of satisfaction, suggesting a general factor of attitude toward the work situation, similar to Spearman's "g" factor for intelligence.

The supplementary measures of satisfaction included with the global measure were added in part to improve the reliability of the measurement and in part to determine satisfaction in specific areas related to the instrumental and expressive dimensions. The instrument is similar to the Moyer Teacher Satisfaction Scale,<sup>66</sup> as well as the

---

<sup>65</sup> Victor H. Vroom, Work and Motivation (New York: John Wiley and Sons, 1964), pp. 99-103.

<sup>66</sup> Donald C. Moyer, "Teachers' Attitude Towards Leadership as They Relate to Teacher Satisfaction" (Unpublished Doctoral Dissertation, University of Chicago, 1954).



instrument developed by Andrews<sup>67</sup> and used by Von Fange.<sup>68</sup> These instruments provide a global measure of satisfaction which is supplemented by measures of general satisfaction in particular areas: professional stimulation from other staff members and from the principal, personal and social relationships with other staff members and with the principal, conformity pressures and occupational satisfaction. Some of these areas are beyond the scope of this study because they do not relate directly to the theory but satisfaction with professional stimulation and personal and social relationships with the formal leaders are of direct significance and have therefore been added to the global measure.

---

<sup>67</sup> J. H. M. Andrews, "Administrative Significance of Psychological Differences between Secondary Teachers of Different Subject Matter Fields" (unpublished Doctoral Dissertation, University of Chicago, 1957).

<sup>68</sup> E. A. Von Fange, "Implications for School Administrations of the Personality Structure of Education Personnel" (unpublished Doctoral Dissertation, University of Alberta, 1961).





## CHAPTER III

### DESCRIPTION OF THE SAMPLE

#### I. SAMPLING PROCEDURES

The sample used in this study consisted of schools selected by random methods from the population of Alberta public schools having a staff size of not less than eight nor more than fourteen members. Additionally, the population consisted of only those schools in which there had been appointed a principal and one, and only one, vice-principal. This population consisted of approximately 271 schools.<sup>1</sup>

Sample size was determined, in part, by the aim for an average of at least twenty schools in each major type, or a lower limit of eighty schools. To obtain this number, 120 schools were selected and invited to take part in the study. Of this total, one hundred schools finally agreed to assist in the project. Most of the schools which declined were contacted and these generally provided reasonable excuses for non-participation. The most common reasons given were teacher involvement in Centennial Projects and teacher involvement in several recent research projects.

All but four of the schools which agreed to take part in the study returned the questionnaires. These four schools were contacted once

---

<sup>1</sup> Department of Education, "List of Operating Schools in Alberta 1966-67," Mimeographed paper. (Edmonton, Alberta: The Department of Education, 1966).



by letter and twice by telephone but the questionnaires were not returned. Five more schools were subsequently rejected because returns from these schools were not satisfactory. In one of these schools there was no vice-principal, in another there were two vice-principals, and in a third staff size had dropped below the minimum level of eight members. The remaining two schools were rejected because of gross omissions in the teacher data.

The sample size therefore consisted of ninety-one schools. The questionnaires were mailed to a coordinator at each school who was asked to distribute the questionnaires to the principal, vice-principal and six teachers selected randomly. (See Letter to Coordinators in Appendix A). The completed questionnaires were collected by the coordinator and mailed by him to the researcher.

## II. THE SAMPLE

Descriptive characteristics of the sample are presented in Tables V to XIII below.

The data in Table V show that elementary schools predominated in the study; 82.4 per cent of the sample being schools that contained elementary grades, and just under one-half the sample (forty-four schools) provided for elementary education exclusively.

Table VI shows the distribution by sex of the principals and vice-principals who took part in the study. The great majority of the principals,



89 per cent, were male, while 11.0 per cent were female. Male vice-principals also predominated but in this case the difference was not as great; 62.6 per cent of the vice-principals were male while 36.3 per cent were female.

TABLE V  
DISTRIBUTION OF SCHOOLS BY GRADES

Grades	Number of Schools	Per Cent
I - VI	44	48.3
I - IX	12	13.2
I - XII	15	16.5
I - VII or VIII	4	4.4
X - XII	5	5.5
Other	11	12.1
Total	91	100.0

The distribution of principals and vice-principals by age groups is shown in Table VII. The modal age group for principals was the 35 to 44 years group. The intermediate groups, spanning the years from 25 to 54, contained slightly more than 80 per cent of the principals. On the other hand, the modal age group for vice-principals was the 25 to 34 years group, and the years between 25 and 44 contained slightly less than 80 per cent of the vice-principals.





TABLE VI  
DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY SEX

Sex	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
Male	81	89.0	57	62.6
Female	10	11.0	33	36.3
No reply	0	0.0	1	1.1
Total	91	100.0	91	100.0

TABLE VII  
DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY AGE

Age Group	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
Under 25	1	1.1	3	3.3
25 to 34	22	24.2	36	39.5
35 to 44	31	34.1	27	29.7
45 to 54	21	23.1	15	16.5
Over 54	16	17.5	10	11.0
Total	91	100.0	91	100.0



The great majority of principals, 87.9 per cent, reported having at least one university degree. Twelve principals, or 13.2 per cent, reported having two or more bachelor's degrees and ten, or 11.0 per cent, reported having a master's degree. One-half of the vice-principals reported that they did not have a degree, 37.4 per cent reported having one bachelor's degree, 5.5 per cent reported having two or more bachelor's degrees and 3.3 per cent reported that they had a master's degree. One principal and three vice-principals did not reply to this question. This data is summarized in Table VIII.

TABLE VIII  
DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY HIGHEST DEGREE OBTAINED

Highest Degree	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
None	10	11.0	46	50.5
One Bachelor's	58	63.7	34	37.4
Two or More				
Bachelor's	12	13.2	5	5.5
Master's	10	11.0	3	3.3
No reply	1	1.1	3	3.3
Total	91	100.0	91	100.0



Total Administrative Experience of Principals and Vice-principals.

Table IX shows the distribution of principals and vice-principals by total experience as principal. Only 7.7 per cent of the principals reported that this was their first year as principal. At the other extreme, 61.5 per cent of the principals reported six or more years experience as principal and 74.7 per cent reported three or more years experience.

TABLE IX

DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY TOTAL EXPERIENCE AS PRINCIPAL

Experience in Years Including This Year	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
0	0	0.0	27	29.7
1	7	7.7	5	5.5
2	15	16.5	1	1.1
3 to 5	12	13.2	6	6.6
6 or more	56	61.5	8	8.8
No reply	1	1.1	44	48.3
Total	91	100.0	91	100.0

Almost one-half of the vice-principals in the sample did not respond to this question. Of those who did, 61.7 per cent (29.7 per cent of the total sample) reported no experience as principal. Fourteen vice-principals reported three or more years experience as principal before they were appointed to their present positions.





Table X shows that nearly one-quarter (24.1 per cent) of the principals in the sample have had no experience as a vice-principal. Only 3.3 per cent reported one year and 35.2 per cent reported three or more years experience as a vice-principal before assuming their present position. Twenty-two principals (24.2 per cent) did not reply

TABLE X  
DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY TOTAL EXPERIENCE AS VICE-PRINCIPAL

Experience in Years Including This Year	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
0	22	24.1	0	0.0
1	3	3.3	26	28.6
2	12	13.2	15	16.5
3 to 5	19	20.9	24	26.3
6 or more	13	14.3	25	27.5
No reply	22	24.2	1	1.1
Total	91	100.0	91	100.0

to this question. The distribution of vice-principals among the categories used for classification tended to be fairly even: 28.6 per cent reported one year experience as vice-principal, 16.5 per cent reported two years, 26.3 per cent reported three to five years and 27.5 per cent reported six or more years. One vice-principal did not



reply to this question.

### Administrative Experience of Principals and Vice-principals in

#### Present Schools

Almost one-quarter of the principals (24.1 per cent) were new to their present position this year. Of the remainder, 16.5 per cent were completing a second year in their present position and 58.3 per cent were completing a third or higher year as principal in their present school. One principal and forty-nine vice-principals (53.8 per cent) did not reply to this question. Of those vice-principals who did reply, four reported having had one or more years experience as principal in the school in which they are now the vice-principal. This data is presented in Table XI.

TABLE XI

#### DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS BY EXPERIENCE AS PRINCIPAL IN PRESENT SCHOOL

Experience in Years Including This Year	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
0	0	0.0	38	41.8
1	22	24.1	1	1.1
2	15	16.5	2	2.2
3 to 5	19	20.9	1	1.1
6 or more	34	37.4	0	0.0
No reply	1	1.1	49	53.8
Total	91	100.0	91	100.0



The data of Table XII indicate that most principals (53.8 per cent) have had no prior experience as vice-principal in their present school. More than a third of the vice-principals (38.4 per cent) were completing their first year as vice-principal in their present school, 18.7 per cent were completing their second year and 40.7 per cent were completing a third or higher year as vice-principal in their present school.

TABLE XII

DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY EXPERIENCE AS VICE-PRINCIPAL IN  
PRESENT SCHOOL

Experience in Years Including This Year	Principals		Vice-Principals	
	Number	Per Cent	Number	Per Cent
0	49	53.8	0	0.0
1	2	2.2	35	38.4
2	5	5.5	17	18.7
3 to 5	9	9.9	20	22.0
6 or more	1	1.1	17	18.7
No reply	25	27.5	2	2.2
Total	91	100.0	91	100.0

Table XIII shows how long principals and vice-principals have worked together in their present positions. Forty schools (43.9 per





cent of the sample) were ones in which either the principal or vice-principal, or both, were completing their first year in their present position. At the other extreme, only 14.3 per cent of the schools in the sample were ones in which the principal and vice-principal have served together in their present positions for six or more years.

TABLE XIII

DISTRIBUTION OF PRINCIPALS AND VICE-PRINCIPALS  
BY LENGTH OF SERVICE TOGETHER IN  
PRESENT POSITIONS

Years Together Including This Year	Number	Per Cent
1	40	43.9
2	17	18.7
3 to 5	18	19.8
6 or more	13	14.3
No reply	3	3.3
Total	91	100.0

Of the remainder, 18.7 per cent of the schools in the sample were ones in which the principal and vice-principal were completing their second year together and 19.8 per cent were ones in which the principal and vice-principal were completing their third to fifth year together.



### III. SUMMARY OF THE CHAPTER

In summary, the sample consisted of ninety-one schools selected at random from the population of Alberta public schools having a staff size of not less than eight or more than fourteen members and with one, and only one, vice-principal.

The majority of these schools contained elementary grades, almost half the sample exclusively so. Male principals and vice-principals predominated over female. The great majority of principals had one or more university degrees but half the vice-principals had no degree whatsoever. Principals tended to be somewhat older than vice-principals.

Only a few principals (7.7 per cent) were completing their initial year as principal but a significant minority (24.1 per cent) were completing their first year as principal in their present school. This difference was not as great for vice-principals of whom 28.6 per cent were completing their initial year as vice-principal and 38.4 per cent were completing their first year in their present position.

Most of the principals (61.5 per cent) had six or more years total experience as principal and a majority of them (58.3 per cent) had been in their present position for three years or longer, including the present year. This was not so for the vice-principals. Only 27.5 per cent reported six or more years total experience as vice-principal and 40.7 per cent of the vice-principals had been in their present position for three years or longer, including the current year.



A large number of schools (43.9 per cent of the sample) were ones in which the principals or vice-principal, or both, were completing their first year in their present position. Of the remainder, only a few (14.3 per cent) were schools in which both the principal and vice-principal had remained in their respective positions for six or more years.





## CHAPTER IV

### ANALYSIS OF THE DATA: THE DISTRIBUTION OF LEADERSHIP FUNCTIONS

#### I. INTRODUCTION

##### Overview of the Analysis

The data collected from the teachers in this study were recorded directly on IBM answer sheets. These sheets were scored by means of an optical scorer from which a card output was obtained. The data collected from the principals and vice-principals were then added to these cards by key-punch.

Analysis of variance was the general statistical method used for testing the hypotheses. There are usually four stated requirements underlying an analysis of variance: the sampling should be random, contributions to total variance must be additive, observations within groups should be normally distributed and the variances within groups must be approximately equal.<sup>1</sup>

Of these four requirements, the one most relevant to this study is, perhaps, the last one. If the variance is not homogeneous, that is, if variances are not approximately equal, a significant F might be due in

---

<sup>1</sup> J. P. Guilford, Fundamental Statistics in Psychology and Education (New York: McGraw-Hill Book Company, 1965), p. 274.



part to this fact.<sup>2</sup> There is, however, general agreement that the F test is fairly robust and can accommodate large differences in variance.<sup>3</sup> Guilford reports that even when departures from homogeneity are gross one can still proceed with analysis of variance but should then discount levels of significance somewhat.<sup>4</sup> He suggests, for example, that significance at the .05 level may actually indicate significance at levels .04 to .07. McNemar reports that differences as large as a ratio of one to nine, "do not greatly disrupt the F test for judging significance in the analysis of variance."<sup>5</sup> There were no tests of significance in this study in which differences were this great. Nevertheless, actual probabilities rather than significance beyond a certain level have been reported wherever practical.

#### Descriptive Statistics of the Sample

Supervisory attitude. Sampling statistics describing the supervisory attitudes of principals and vice-principals are summarized in Table XIV. These statistics provide estimates of the parameters of the population from which the sample was drawn.

---

<sup>2</sup> Loc. cit.

<sup>3</sup> See Ibid., pp. 300-1. See also George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Company, 1966), p. 294 and Quinn McNemar, Psychological Statistics (New York: John Wiley and Sons, Inc., 1962), p. 252.

<sup>4</sup> Op. cit., p. 274.

<sup>5</sup> Op. cit., p. 252.



Table XIV shows that principals were slightly higher than vice-principals in mean Structure scores but the lower standard deviation for principals points to a tendency for this group to vary less than the vice-principals in Structure. Neither of the differences between Structure means or variances was significant.

TABLE XIV

SUMMARY OF STATISTICS DESCRIBING SUPERVISORY  
ATTITUDES OF PRINCIPALS AND VICE-PRINCIPALS

Group	Number	Structure		Consideration	
		Mean	S. D.	Mean	S. D.
Principal	91	40.8	6.26	59.3	5.50
Vice-principal	91	38.8	8.68	58.5	5.84

Differences in Consideration statistics between principals and vice-principals were similar to those of Structure. Principal mean score in Consideration was slightly higher than vice-principal mean score but principal standard deviation was slightly lower. This points to a tendency for the principal group to vary less than the vice-principal group in Consideration. Neither of the differences between Consideration means or variances was significant.

Leader behavior. Statistics dealing with the leader behavior scores of principals and vice-principals are presented in Table XV.





As these statistics form the basis for study of the first research problem they are presented at this time without comment but are discussed in detail under the appropriate section below.

TABLE XV

SUMMARY OF STATISTICS DESCRIBING LEADER BEHAVIOR  
OF PRINCIPALS AND VICE-PRINCIPALS

Group	Number Teachers Reporting	Leader Behavior Score			
		Instrumental		Expressive	
		Mean	S. D.	Mean	S. D.
Principal	546	63.8	11.17	80.6	11.90
Vice-principal	546	57.4	13.00	79.0	11.86

Expressed teacher satisfaction. Statistics describing the five measures of expressed teacher satisfaction are summarized in Table XVI.

Two characteristics of Table XVI are of interest. First, the relatively high means in all five cases point to a skewing of satisfaction responses. These means were based on a five-point scale ranging in value from 1 to 5. If no skewing was present all five means would tend to cluster around a value of 3.0. The means in the table however range in value from a low of 3.46 to a high of 3.79.

Second, the relatively narrow range in means and standard deviations in the table points to the possibility of some similarity among the measures of satisfaction. This possibility is supported by



the data presented in Table XVII which shows the intercorrelations among the five measures. These intercorrelations range from a low of 0.4441 to a high of 0.6520. All of the correlation coefficients presented in Table XVII are significant beyond the .0001 level of probability.

TABLE XVI  
SUMMARY OF STATISTICS DESCRIBING  
EXPRESSED TEACHER SATISFACTION (N=546)

Satisfaction Measure	Mean	S. D.
Professional stimulation	3.50	1.00
Social relations	3.79	0.97
Working conditions	3.60	0.92
Social climate	3.46	1.02
All things considered	3.65	0.88

Rated effectiveness. Statistics dealing with the rated effectiveness of the principal and vice-principal separately, and as a leadership team, are presented in Table XVIII. This table shows a tendency for principals to be rated higher in effectiveness than vice-principals who, in turn, were rated higher than the two of them acting as a leadership team. None of the differences, however, was significant.

Table XVIII also shows a skewing of the rating scores similar to that noted for the satisfaction scores in Table XVI, page 80. These scores, too, were based on a five-point scale ranging in value from 1



TABLE XVII

PRODUCT -MOMENT INTERCORRELATIONS AMONG  
FIVE MEASURES OF EXPRESSED TEACHER SATISFACTION

	I	II	III	IV	V
I	1.0000	.6127	.5408	.5224	.6520
II	.6127	1.0000	.4441	.5863	.5821
III	.5408	.4441	1.0000	.4511	.5941
IV	.5224	.5863	.4511	1.0000	.6302
V	.6520	.5821	.5941	.6302	1.0000

note: for  $r = 0.40$ ,  $p < .0001$ .

Legend of satisfaction measures:

I	--	professional stimulation
II	--	social relations
III	--	working conditions
IV	--	social climate
V	--	all things considered

TABLE XVIII

SUMMARY OF STATISTICS DESCRIBING PRINCIPAL AND VICE-  
PRINCIPAL EFFECTIVENESS AS RATED BY TEACHERS (N=546)

Effectiveness Rating	Mean	S. D.
Principal	3.53	0.99
Vice-principal	3.46	0.97
Team	3.42	1.06





to 5. If no skewing was present, the means would tend to cluster around a value of 3.0. However the means in Table XVIII range in value from a low of 3.42 to a high of 3.53.

## II. THE DISTRIBUTION OF LEADERSHIP FUNCTIONS

### Introduction

Problem one asked, "How are instrumental and expressive leadership functions distributed between principals and vice-principals." This problem led to the following null hypotheses:

1. There will be no significant difference in instrumental leader behavior between principals and vice-principals.
2. There will be no significant difference in expressive leader behavior between principals and vice-principals.

### Findings

Hypothesis 1: Instrumental leader behavior. This hypothesis was tested by means of a t test. The mean instrumental leader behavior scores for the principals and vice-principals are reported in Table XIX. The mean score of principals in instrumental leader behavior was 6.4 points higher than that of the vice-principals. Table XIX indicates a corresponding t value of 8.71. The probability that such a high value for t was due to chance variations was less than one in ten thousand. Consequently the hypothesis that there would be no significant difference in instrumental leader behavior between principals and vice-principals was rejected.



Hypothesis 2: Expressive leader behavior. This hypothesis was also tested by means of a t test. The results of the analysis are reported in Table XX.

TABLE XIX

## SIGNIFICANCE OF DIFFERENCE IN INSTRUMENTAL LEADER BEHAVIOR BETWEEN PRINCIPALS AND VICE-PRINCIPALS

Group	Number	Mean Behavior	Diff.	t	p (two tailed)
Principals	91	63.8	6.4	8.71	<.0001
Vice-principals	91	57.4			

This table shows that there was a difference of 1.6 between the means. This difference was not significant at the .01 level. Consequently the hypothesis that there would be no significant difference in expressive leader behavior between principals and vice-principals was not rejected.

TABLE XX

## SIGNIFICANCE OF DIFFERENCE IN EXPRESSIVE LEADER BEHAVIOR BETWEEN PRINCIPALS AND VICE-PRINCIPALS

Group	Number	Mean Behavior	Diff.	t	p (two tailed)
Principals	91	80.6	1.6	2.22	<.03
Vice-principals	91	79.0			



### Discussion of Findings

The significant difference in instrumental leader behavior between principals and vice-principals was in the direction indicated by the theory. The theory also indicated the difference in expressive leader behavior between principals and vice-principals would be significant, with the vice-principal scoring higher than the principal. This was not the case.

Perhaps one reason why there was no significant difference in expressive leader behavior between principals and vice-principals may have been because a large number of schools were ones in which either the principal, or vice-principal, or both, were new to their positions this year. In this respect, the theoretical framework had pictured group processes as occurring in two stages.<sup>6</sup> The first was the instrumental stage during which a task specialist emerges; the second, an expressive stage during which a social-emotional specialist emerges.

It was possible that in all schools, including those in which the principal and/or vice-principal were in their inaugural year, the instrumental phase had proceeded to the point where the principal had emerged as the instrumental leader, a possibility supported by rejection of the first null hypothesis.

It was also possible that in those schools where the principal and/or the vice-principal were in their inaugural year the expressive

---

<sup>6</sup> Supra, pp. 9-14.





stage had not proceeded to the point where an expressive leader had emerged. Furthermore, the theory implies that at the start the instrumental leader is initially liked because he is satisfying group needs. Consequently the principal, in the short term, may be recognized, in part, as an expressive leader. These two factors warranted a re-analysis of the expressive leader behavior of the principals and vice-principals with those schools in which the principal and/or vice-principal were in their inaugural year removed. It was possible these first year schools had biased the differences in the remaining schools. The result of this re-analysis is presented in Table XXI. The difference between the two means was not significant, with almost the same value of  $\underline{t}$  as before.

TABLE XXI

SIGNIFICANCE OF DIFFERENCE IN EXPRESSIVE LEADER  
BEHAVIOR BETWEEN PRINCIPALS AND VICE-PRINCIPALS IN ALL  
SCHOOLS BEYOND ONE YEAR JOINT SERVICE

Group	Number	Mean	Diff.	t	p (two-tailed)
Principal	48	81.0	2.2	2.25	.03
Vice-principal	48	78.8			

### Implications

Study of problem one indicated that, relative to the vice-principal, the principal was the instrumental leader in the schools surveyed. The



theoretical framework had pointed to the possibility that situational factors would exert strong influence on the principal to fulfill an instrumental role. It would appear that the findings have tended to support this possibility.

The absence of a clear division of functions between principals and vice-principals in expressive leader behavior may be due to several factors. First, principals may be making a conscious effort to supply leadership in both dimensions, and may be doing so with some success. In this respect, the Alberta school principal may be somewhat more sophisticated than the formal leader in other organizations. For over a decade now, there has been a tradition of training for leadership in the public schools, a tradition supported by government, university and the teachers' association.

Such a possibility would not necessarily be at variance with dual leadership theory. Rather, it may serve to extend the theory by incorporating the effects of acquired abilities, or training, with both the influence of situational factors and initial predispositions to be instrumental or expressive.

Second, the fact that the vice-principal was not significantly lower than the principal in expressive leader behavior should not be overlooked. The vice-principal in this study was younger, had less training and less experience, but still emerged as the partner of the principal in the expressive dimension. This could be because the



principal can only be partially successful in fulfilling both roles. This possibility is not at variance with the theory which argues that it is very difficult for a single individual to fulfill both roles.

A third possibility is that neither the principal nor the vice-principal is the expressive leader. It may be vested in some other individual on the staff, or it may be distributed among several persons. This particular possibility was beyond the scope of the study which was delimited to the leader behavior styles of the two formal leaders.

### Summary

Problem one studied how instrumental and expressive leadership functions were distributed between principals and vice-principals. Principals were significantly higher than vice-principals in instrumental leader behavior. There was no significant difference between principals and vice-principals in expressive leader behavior.

A large number of schools in the sample were ones in which either the principal or vice-principal, or both, were new to their present positions this year. As the theory pointed to the possibility of a two-stage development, an instrumental one followed by an expressive one, it was possible that time had been too short for the vice-principal to emerge as the expressive leader in these new schools. The large number of these schools may have diluted the effects in the other schools. Therefore these schools were removed from the analysis but the difference in expressive leader behavior between principals





and vice-principals was still not significant.

The findings supported that part of the theory which suggested the principal would be the instrumental leader. The absence of a clear-cut division in the expressive dimension may be due to the fact that principals have acquired the ability to be partially successful in this domain as well as fulfilling an instrumental function. It is also possible that some non-formal leader on the staff is the expressive leader or that expressive leader behavior is a shared function between principal, vice-principal and/or others.



## CHAPTER V

### ANALYSIS OF THE DATA: SUPERVISORY ATTITUDE AND LEADER BEHAVIOR

This chapter deals with the relationships between supervisory attitudes and leader behavior styles of the principal and vice-principal.

The chapter is divided into two main sections: The first section below reports on the study of the second problem which dealt with the relationship between supervisory attitudes and leader behavior styles of principals and vice-principals separately. The third problem, in the following section, is concerned with relationships between different combinations of supervisory attitudes of principals and vice-principals and the particular leader behavior style that is manifested by them.

#### I. SUPERVISORY ATTITUDE AND LEADER BEHAVIOR

The second problem was, "How significant are personal pre-dispositions to be instrumental or expressive in determining the particular leadership style a given principal or vice-principal adopts?" This problem led to the following null hypotheses:

3. There will be no significant differences in instrumental leader behavior among principals of the four major types of schools classified on the basis of supervisory attitude.

4. There will be no significant differences in expressive leader



behavior among principals of the four major types of schools classified on the basis of supervisory attitude.

5. There will be no significant differences in instrumental leader behavior among vice-principals of the four minor types of schools classified on the basis of supervisory attitude.

6. There will be no significant differences in expressive leader behavior among vice-principals of the four minor types of schools classified on the basis of supervisory attitude.

Descriptions of the school types used were developed in Chapter I under the section entitled Definition of Terms. Briefly, capital letters were used to identify school types in which the principal (or vice-principal) was above the median in Structure and/or Consideration; lower case letters for types in which the principal (or vice-principal) was below the median in Structure or Consideration. Thus, major type Sc was one in which the principal was above the median in Structure, below the median in Consideration; minor type Sc would refer to a similar situation for the vice-principal.

### Findings

Hypothesis 3: Principal instrumental leader behavior. The analysis of variance used to test this hypothesis is presented in Table XXII which shows an F ratio of 0.38 and a probability of 0.765. Therefore the hypothesis that there would be no significant differences in instrumental leader behavior among principals of the four major types of schools was not rejected.





TABLE XXII

ANALYSIS OF VARIANCE OF INSTRUMENTAL LEADER BEHAVIOR  
OF PRINCIPALS BY MAJOR SCHOOL TYPES CLASSIFIED ON  
BASIS OF SUPERVISORY ATTITUDE

Source	SS	MS	df	F	p
Groups	137.562	45.85	3	0.38	0.765
Error	55293.781	119.17	464		

Hypothesis 4: Principal expressive leader behavior. There were significant differences in principal expressive leader behavior among the four types of schools. The analysis is summarized in Table XXIII which shows the probability difference in means are due to chance variations is less than four in ten thousand. Therefore the hypothesis that there would be no significant differences in expressive leader behavior of principals among the four major types of schools was rejected.

The Newman-Keuls comparison between ordered means<sup>1</sup> indicates the expressive leader behavior of principals in major type SC schools was significantly higher than the expressive leader behavior of principals in major type Sc schools. This was the only significant difference among the means.

---

<sup>1</sup> B. J. Winer, Statistical Principles in Experimental Design (Toronto: McGraw Hill Book Company, 1962), pp. 93-4.



TABLE XXIII

ANALYSIS OF VARIANCE OF EXPRESSIVE LEADER BEHAVIOR  
OF PRINCIPALS BY MAJOR SCHOOL TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	2525.594	841.86	3	6.25	.00037
Error	62502.813	134.70	464		

B. Newman-Keuls Comparison Between Ordered Means

Types (major)		SC	sc	sC	Sc
(major)	Means	84.7	81.4	81.2	78.1
Sc	78.1	**	n. s.	n. s.	--

\*\* significant at .01 level

n. s. not significant



Hypothesis 5: Vice-principal instrumental leader behavior.

The analysis of variance used to test this hypothesis is presented in Table XXIV which shows an F of 4.34 with an associated probability of 0.00497. Differences among the four types were significant beyond the .01 level of probability. Therefore the hypothesis that there would be no significant differences in instrumental leader behavior among vice-principals of the four minor types of schools was rejected.

The Newman-Keuls comparison of ordered means indicates that the instrumental leader behavior of vice-principals in minor type SC schools was significantly higher than the instrumental leader behavior of vice-principals in minor types sc and Sc schools.

Hypothesis 6: Vice-principal expressive leader behavior. This hypothesis was tested by means of the analysis of variance summarized in Table XXV. The F ratio of 7.46 and probability of 0.000071 in this table indicates differences in mean expressive leader behavior of vice-principals among the four minor types were highly significant. Therefore the hypothesis that there would be no significant differences in expressive leader behavior among vice-principals of the four minor types of schools was rejected.

The Newman-Keuls comparison of ordered means shows the expressive leader behavior of vice-principals in minor types sC schools to be significantly higher than those in minor type sc and Sc schools, but not significantly higher than vice-principals in minor type SC schools.





TABLE XXIV

ANALYSIS OF VARIANCE OF INSTRUMENTAL LEADER BEHAVIOR OF  
VICE-PRINCIPALS OF MINOR SCHOOL TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	2109.125	703.04	3	4.34	.00497
Error	79085.047	162.06	488		

B. Newman-Keuls Comparison Between Ordered Means

Types(minor) (minor)	Means	SC 60.8	sC 56.9	Sc 55.9	sc 55.3
sc	55.3	**	n. s.	n. s.	--
Sc	55.9	*	n. s.	--	

\*\* significant at .01 level

\* significant at .05 level

n. s. not significant



TABLE XXV

ANALYSIS OF VARIANCE OF EXPRESSIVE LEADER BEHAVIOR OF  
VICE-PRINCIPALS BY MINOR SCHOOL TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	2900.844	966.95	3	7.46	.000071
Error	63290.625	129.69	488		

B. Newman-Keuls Comparison Between Ordered Means

Types (minor) (minor)	Means	sC	SC	Sc	sc
		81.8	80.4	77.8	75.3
sc	75.3	**	**	n. s.	--
Sc	77.8	*	n. s.	--	

\*\* significant at .01 level

\* significant at .05 level

n. s. not significant



Vice-principals in minor type SC schools were significantly higher in expressive leader behavior than vice-principals in type sc schools. The difference in expressive leader behavior between vice-principals of minor type Sc and sc schools was not significant.

### Discussion of Findings

The hypotheses tested in this section dealt with the relationships between supervisory attitude and leader behavior style. The dimensions of supervisory attitude used, Structure and Consideration, were operational definitions of an individual's predisposition to be instrumental and expressive, respectively. The theoretical framework had suggested individuals are predisposed to be instrumental or expressive. These hypotheses sought to discover the extent to which such predispositions might relate to leader behavior styles.

There appears to be no clear relationship between the supervisory attitude of the principal and his instrumental leader behavior. Major type SC schools were those in which the principal's attitude was above the median in both Structure and Consideration. Major type Sc schools were those in which the principal's attitude was above the median in Structure but below the median in Consideration. Significant differences favoring either of these types might have given some indication of a relationships between a predisposition to be instrumental and instrumental leader behavior. Major type Sc schools were of particular interest because principals in these schools were above the median in Structure





only. If it is difficult for an individual to fulfill both instrumental and expressive roles, then it would seem that such principals might focus on instrumental functions. However the instrumental leader behavior of principals in major type Sc schools was not significantly different from the instrumental leader behavior of principals in any of the other major types.

Similarly, major type sC schools were those in which the principal's supervisory attitude was above the median in Consideration. The theory would seem to indicate these principals might focus on expressive functions. But study of hypothesis four indicates there is no significant difference in expressive leader behavior between principals of these schools and principals of major types Sc and sc schools, in both of which the principal was below the median in Consideration.

Testing of the fourth hypothesis did, however, reveal a weak relationship between supervisory attitude and leader behavior. Principals of major type SC schools were significantly different from, and higher than those of Type Sc schools in expressive leader behavior. Principals in both of these types were above the median in Structure, the difference being that principals of major type SC schools were also above the median in Consideration while those in major type Sc schools were below the median in Consideration.

Study of the findings dealing with the fifth hypothesis showed there was no consistent relationship between supervisory attitude and instru-





mental leader behavior of vice-principals. Vice-principals of minor type SC schools were significantly different and higher than vice-principals of minor type sc schools in instrumental leader behavior. These differences in instrumental leader behavior paralleled the differences in supervisory attitude which formed the basis of classification for school types, and as such were not at variance with the theory. However, the other significant difference provided no further support for the theory. Instrumental leader behavior of vice-principals in minor type SC schools was significantly different and higher than that of vice-principals in minor type Sc schools. But in both types vice-principals were above the median in Structure. If, as the theory implies, there is a direct relationship between the supervisory attitude, Structure, and instrumental leader behavior, it would seem there would be no difference in instrumental leader behavior between vice-principals of minor type SC schools and vice-principals of minor type Sc schools. Such was not the case.

The sixth hypothesis indicated that the expressive leader behavior of vice-principals in minor types SC and sC schools was significantly different and higher than the expressive leader behavior of vice-principals in minor type sc schools. Vice-principals in minor type SC and sC schools were above the median in Consideration; those in minor type sc schools were below the median. The expressive leader behavior of vice-principals of minor type sC schools was also significantly different



and higher than those in minor type Sc schools. In this latter type, vice-principals were below the median in Consideration. These differences are to be expected if a predisposition to be expressive is directly related to expressive leader behavior. However, further support for the theory was not found when minor types SC and Sc were compared. Even though vice-principals of the former type were above the median in supervisory attitude, Consideration, and those in the latter were below the median, the difference in expressive leader behavior was not significant.

In summary testing of hypothesis six which dealt with the expressive leader behavior of the vice-principal revealed the strongest relationship between supervisory attitude and leader behavior. Even here, though, the relationships were not completely as indicated by the theory. A much weaker relationship between supervisory attitude and leader behavior was discovered when hypotheses four was tested. This hypothesis dealt with the expressive leader behavior of the principal.

No consistent pattern between supervisory attitude and instrumental leader behavior was discovered when hypothesis three and five were tested. In the case of the principal, there appeared to be no relationship, at all, between supervisory attitude and instrumental leader behavior. Vice-principals who were above the median in both of Structure and Consideration were significantly different and higher in instrumental leader behavior than those who were below the median in both of Structure and Consideration. But vice-principals who were above



the median in both of Structure and Consideration were also significantly different and higher in instrumental leader behavior than those who were above the median in Structure only.

### III. SUPERVISORY ATTITUDE AND LEADER BEHAVIOR (JOINTLY)

The third problem was, "How significant are complementary predispositions of principals and vice-principals to be instrumental and expressive in determining the leadership style which each of the two leaders manifest?" This problem led to the following null hypotheses:

7. There will be no significant differences in instrumental leader behavior among principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

8. There will be no significant differences in expressive leader behavior among principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

9. There will be no significant differences in instrumental leader behavior among vice-principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

10. There will be no significant differences in expressive leader behavior among vice-principals of the sixteen sub-types of schools classified on the basis of supervisory attitude.

It was not possible to compare differences between all sixteen categories of school types because of the very low number of schools







in some of the categories. Ten categories, each containing four or more schools, were used. A description of the supervisory attitude of the principal and vice-principal in each of these categories is presented in Table XXVI in order to assist the reader in interpreting the analysis.

### Findings

Hypothesis 7: Principal instrumental leader behavior. The analysis of variance used to test hypothesis seven is presented in Table XXVII. This table shows an  $F$  of 2.17 with an associated probability of 0.0235.

Although this level of probability is not especially high, the null hypothesis was rejected. The Newman-Keuls comparison between ordered means indicates there was a significant difference between one pair of means only, and that only at the .05 level of confidence. Principals of sub-type scsc schools, in which both the principal and vice-principal were below the median in both of Structure and Consideration attitudes, were significantly different and higher in instrumental leader behavior than principals of sub-type sCsC schools. This latter type of schools consisted of those in which both the principal and vice-principal were below the median in Structure and above the median in Consideration.

Hypothesis 8: Principal expressive leader behavior. Table XXVIII summarizes the analysis of variance used to test hypothesis eight. This summary shows an  $F$  of 5.47 with an associated probability of 0.00001. There were highly significant differences among the means.



TABLE XXVI

DESCRIPTION OF SCHOOL SUB-TYPES USED TO COMPARE  
LEADER BEHAVIOR STYLES

Sub-type	Number of Schools	Principal		Vice-Principal	
		Structure	Consideration	Structure	Consideration
SCSc	6	above median	above median	above median	below median
ScSC	8	above median	below median	above median	above median
ScSc	6	above median	below median	above median	below median
ScsC	6	above median	below median	below median	above median
sCSc	6	below median	above median	above median	below median
sCsC	5	below median	above median	below median	above median
sCsc	7	below median	above median	below median	below median
scSC	5	below median	below median	above median	above median
scsC	6	below median	below median	below median	above median
scsc	4	below median	below median	below median	below median



TABLE XXVII

ANALYSIS OF VARIANCE OF INSTRUMENTAL LEADER BEHAVIOR  
OF PRINCIPALS BY SCHOOL SUB-TYPES CLASSIFIED ON  
BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	2334.750	259.42	9	2.17	.0235
Error	41101.578	119.48	344		

B. Newman-Keuls Comparison Between Ordered Means

Sub-		scsc	ScSc	scSC	ScSC	sCSc	sCsc	SCSc	scsC	ScsC	sCsC
types	Means	69.1	66.9	66.6	66.3	65.5	64.6	63.6	62.0	61.4	59.7
sCsC	59.7	*	ns	ns	ns	ns	ns	ns	ns	ns	--

\* significant at .05 level

ns not significant



TABLE XXVIII

ANALYSIS OF VARIANCE OF EXPRESSIVE LEADER BEHAVIOR  
OF PRINCIPALS BY SCHOOL SUB-TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	6844.437	760.49	9	5.47	.00001
Error	47837.532	139.06	344		

B. Newman-Keuls Comparison Between Ordered Means

Sub-		sCSc	sCsC	SCsc	ScSC	SCSc	ScSc	scSC	scsc	ScsC	sCsC
types	Means	85.4	83.3	83.3	81.6	80.8	80.7	80.1	79.1	72.0	71.0
sCsC	71.0	**	**	**	**	**	**	**	*	ns	--
ScsC	72.0	**	**	**	*	*	*	*	*	--	

\*\* significant at .01 level

\* significant at .05 level

ns not significant





Therefore the null hypothesis was rejected.

The Newman-Keuls comparison among ordered means shows that principals of sub-type ScsC schools, and also principal of sub-type sCsC schools, were significantly different and lower than principals in all other types of schools in expressive leader behavior. The difference between principals of sub-type ScsC and sub-type sCsC schools was not, however, significant. Sub-type ScsC schools were ones in which the principal's supervisory attitude complemented that of the vice-principal's: the principal was above the median in Structure and below the median in Consideration while the vice-principal was below the median in Structure and above the median in Consideration. Sub-type sCsC schools were ones in which the supervisory attitudes of the principal and vice-principal were similar: both were below the median in Structure and above the median in Consideration.

Hypothesis 9: Vice-principal instrumental leader behavior. The analysis of variance used to test this hypothesis is presented in Table XXIX. This table shows an F of 1.20 with an associated probability of 0.2913. It was most unlikely that there were significant differences in instrumental leader behavior between vice-principal of the various sub-types. The hypothesis that there would be no significant differences in instrumental leader behavior among vice-principal of the sixteen sub-types of schools classified on the basis of supervisory attitude was not rejected.



TABLE XXIX

ANALYSIS OF VARIANCE OF INSTRUMENTAL LEADER BEHAVIOR  
OF VICE-PRINCIPALS BY SCHOOL SUB-TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

Source	SS	MS	df	F	p
Groups	1726.344	191.82	9	1.20	.2913
Error	54794.906	159.29	344		

Hypothesis 10: Vice-principal expressive leader behavior. The analysis of variance used to test the tenth hypothesis is presented in Table XXX. This table shows an F of 1.98 with an associated probability of 0.0403. Although this level of probability is not especially high, the null hypothesis was rejected.

The Newman-Keuls comparison between ordered means indicates that the expressive leader behavior of vice-principals in sub-type sCsC was higher, significantly so at the .05 level of confidence, than the expressive leader behavior of vice-principal in sub-type sCSc schools.

#### Discussion of Findings

The hypotheses tested in this section extended the study of relationships between supervisory attitude and leader behavior. The previous section had dealt with principals and vice-principals separately. This section studied the relationship between different combinations of the supervisory attitudes of principals and vice-



TABLE XXX

ANALYSIS OF VARIANCE OF EXPRESSIVE LEADER BEHAVIOR  
OF VICE-PRINCIPALS BY SCHOOL SUB-TYPES CLASSIFIED  
ON BASIS OF SUPERVISORY ATTITUDE

A. Analysis

Source	SS	MS	df	F	p
Groups	1935.531	215.06	9	1.98	.0403
Error	37296.250	108.42	344		

B. Newman-Keuls Comparison Between Ordered Means

Sub-		sCsC	scSC	ScsC	scsC	ScSC	ScSc	SCsc	ScSc	scsc	sCSc
types	Means	84.1	82.9	81.6	81.0	80.2	79.4	78.6	77.9	77.5	75.7
sCSc	75.7	*	ns	ns	ns	ns	ns	ns	ns	ns	

\* significant at .05 level

ns not significant





principals and their concomitant leader behavior styles.

School types in which the principal and vice-principal shared complementary supervisory attitudes, that is, the principal was high in one dimension, low in the other and the vice-principal was vice versa, were of special interest. The theoretical framework had suggested individuals are predisposed to be instrumental or expressive. It was possible this predisposition might have the greatest potential to develop in those schools where the principal and vice-principal shared complementary attitudes. For example, in school types where the principal was high only in Structure and the vice-principal was high only in Consideration, a division in leadership functions might occur. The principal might focus on instrumental functions; the vice-principal on expressive functions.

The section dealing with hypothesis seven indicated that this was not the case with respect to the instrumental leader behavior of the principal. Likewise, study of hypothesis nine showed no clear relationship between the supervisory attitude of the vice-principal and his instrumental leader behavior. The complementary school types, sub-type ScsC and sub-type sCSc did not differ significantly from any other type in either case.

The complementary school types also failed to differ significantly from all other types with respect to the expressive leader behavior of both principals and vice-principals. Testing of hypothesis eight dem-



onstrated that the expressive leader behavior of principals in sub-type sCSc schools was not significantly different from that of principals in any other type. Hypothesis ten showed a similar situation existed between vice-principals of sub-type ScsC schools and vice-principals of all other types.

A direct comparison of the two complementary school types also failed to show any significant differences in instrumental leader behavior for either principals or vice-principals. Table XXXI shows

TABLE XXXI  
COMPARISON OF LEADER BEHAVIOR STYLES  
BETWEEN COMPLEMENTARY SCHOOL TYPES

	School Sub-types		Difference	t	p
	ScsC (N=6)	sCSc (N=6)			
Principal instrumental leader behavior	61.4	65.5	4.1	1.63	>.05
Vice-principal instrumental leader behavior	56.0	55.0	1.0	0.33	>.05
Principal expressive leader behavior	72.0	85.4	13.4	4.60	<.01
Vice-principal expressive leader behavior	81.6	75.7	5.9	2.50	<.01



the mean difference between vice-principals was only 1.0. The difference between principals was greater (4.1) but opposite in direction to what might be expected. This difference, too, was not significant.

Table XXXI does show significant differences in expressive leader behavior between the complementary school types for both the principal and the vice-principal. Principals in sub-type sCSc schools were significantly higher in expressive leader behavior than those of sub-type ScsC schools. Principals in sub-type sCSc schools were above the median in Consideration; those in sub-type ScsC schools were below the median. Likewise, vice-principals in sub-type ScsC schools were significantly higher in expressive leader behavior than those of sub-type sCSc schools. Vice-principals in sub-type ScsC schools were above the median in Consideration; those in sub-type sCSc schools were below the median. These differences may be indicative of a weak relationship between Consideration and expressive leader behavior.

Hypotheses eight and ten provided additional indications of a weak relationship between the supervisory attitude, Consideration, and expressive leader behavior. Testing of hypothesis eight showed principals of sub-type ScsC schools to be significantly lower in expressive leader behavior than those in any other type. Sub-type ScsC principals were below the median in Consideration. Likewise, testing of hypothesis ten indicated vice-principals of sub-type sCSc





schools were significantly higher in expressive leader behavior than vice-principals in sub-type sCSc schools. Vice-principals in the former type were above the median in Consideration, those in the latter type were below the median

Two of the significant differences discovered during study of this problem did not provide any support for a direct relationship between supervisory attitude and leader behavior style. Testing of hypothesis seven showed principals in sub-type scsc schools were significantly higher in instrumental leader behavior than principals of sub-type sCsC schools, yet both of these groups of principals were below the median in Structure. Testing of hypothesis eight indicated that principals in sub-type sCsC schools were significantly lower in expressive leader behavior than those in any other type. These principals were above the median in Consideration.

In summary, study of hypotheses seven and nine dealing with the instrumental leader behavior of principals and vice-principals showed no clear relationship between supervisory attitude and leader behavior style. The significant difference discovered when hypothesis seven was tested did not provide any support for the theory. Hypothesis nine was rejected. There were no significant differences in instrumental leader behavior of vice-principals among the ten types of schools studied. Thus, contrary to what the theory suggested, there does not appear to be a direct relationship between supervisory attitude and instrumental





leader behavior.

Hypotheses eight and ten showed, at best, a weak relationship between supervisory attitude and expressive leader behavior style. Although there were six sub-types in which the principal was below the median in Consideration, in only one of these was the expressive leader behavior of the principal significantly different from, and lower than, those school types in which the principal was above the median in Consideration. A similar situation was discovered for the vice-principal during testing of hypothesis ten. In five of the sub-types the vice-principal was above the median in Consideration. But in only one of these was the expressive leader behavior of the vice-principal significantly different from, and higher than, that of the other type in which the vice-principal was below the median in Consideration.

The weak relationship between supervisory attitude and leader behavior style also appeared when the two complementary school types were compared with each other. Although differences in instrumental leader behavior for either of the principal or vice-principal were not significant, differences in expressive leader behavior for both were significant. The direction of these differences agreed with the theory.



#### IV. SUMMARY AND CONCLUSIONS

The purpose of this chapter was to study the relationship between supervisory attitude and leader behavior style. The theoretical framework had indicated individuals are predisposed to be instrumental or expressive. This led to the study of problems two and three which were concerned with the extent to which these predispositions might become manifest.

Problem two dealt with the relationship between supervisory attitude and leader behavior style of principals and vice-principals separately. Study of this problem indicated there was no consistent relationship between supervisory attitude and instrumental leader behavior for either principals or vice-principals. A weak relationship, however, was discovered between supervisory attitude and expressive leader behavior for both principals and vice-principals.

Problem three dealt with different combinations of supervisory attitudes of principals and vice-principals and their concomitant leader behavior styles. The results from this problem supported the findings from problem two with respect to instrumental leader behavior. No consistent relationship between supervisory attitude and instrumental leader behavior for either the principal or vice-principal was discovered. Study of this problem also indicated there was a very weak relationship between supervisory attitude and expressive leader behavior.



The two complementary school types in problem three were compared directly because it was here the theory indicated significant differences were most likely. This comparison showed the differences in instrumental leader behavior of both the principal and vice-principal between the two types were not significant. The differences in expressive leader behavior of both the principal and vice-principal between the two types were significant and the direction of these differences agreed with the theory.

To summarize, there appears to be no consistent relationship between supervisory attitude and instrumental leader behavior but there does appear to be a weak relationship, consistent with the theory, between supervisory attitude and expressive leader behavior.





## CHAPTER VI

### ANALYSIS OF THE DATA: LEADER BEHAVIOR, EXPRESSED SATISFACTION AND RATED EFFECTIVENESS

This phase of the study focused on the relationship between leader behavior styles of the principal and vice-principal and the expressed satisfaction of the teachers, as well as teacher ratings of the effectiveness of the principal and vice-principal, separately and jointly.

Leader behavior style was used as the independent variable to classify schools for comparisons of expressed satisfaction and rated effectiveness. The sixteen sub-types of schools formed by all the different combinations of principal-vice principal leader behavior styles are summarized in Table II, page 32. All but one sub-type contained four or more schools. Sub-type iEie which consisted of only two schools was retained in the analysis because it was a complementary school type in which the principal was above the median in one leader behavior dimension, below in the other and the vice-principal was the opposite. As such, it was most desirable to include this type for comparisons with the other complementary type, leiE, in which the leader behavior styles of both the principal and vice-principal were vice-versa to the leader behavior styles of the principal and vice-principal in type iEie schools. This comparison was directly related to the theory which suggested, in



essence, that a division in leadership functions would lead to greater effectiveness and efficiency.

## I. LEADER BEHAVIOR AND EXPRESSED SATISFACTION

Problem four asked, "What is the relationship between different combinations of leader behavior styles of principals and vice-principals and teacher satisfaction?" This problem led to the following null hypotheses:

11. There will be no significant differences in expressed teacher satisfaction with the professional stimulation, assistance and direction provided by the principal and vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

12. There will be no significant differences in expressed teacher satisfaction with personal and social relationships with the principal and vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

13. There will be no significant differences in expressed teacher satisfaction with working conditions generally among the sixteen sub-types of schools classified on the basis of leader behavior styles.

14. There will be no significant differences in expressed teacher satisfaction with the social climate generally among the



sixteen sub-types of schools classified on the basis of leader behavior styles.

15. There will be no significant differences in expressed teacher satisfaction, all things considered, among the sixteen sub-types of schools classified on the basis of leader behavior styles.

### Findings

#### Hypothesis 11. Satisfaction with professional stimulation.

The analysis of variance used to test this hypothesis is presented in Table XXXII which shows an F of 6.21 and a probability of less than 0.00001. Therefore the null hypothesis was rejected. There were significant differences in teacher satisfaction with the professional stimulation provided by the principal and vice-principal among the sixteen sub-types of schools.

The nature of these differences is indicated by the schematic comparison of ordered means<sup>1</sup> which forms a part of Table XXXII. Sub-type IEiE ranked highest, followed by sub-types iEIE and IEIE. None of the differences among these three sub-types was significant but all three were significantly higher than sub-types ieIE, ieie and ieie. Furthermore, sub-types IEiE and iEIE were significantly higher than sub-types Ieie and ieie; sub-type IEiE was also significantly higher than sub-type IeIE.

---

<sup>1</sup> B. J. Winer, Statistical Principles in Experimental Design (New York: McGraw-Hill Book Company, 1962), p. 84.











Hypothesis 12: Satisfaction with personal and social relationships. This hypothesis was tested by means of the analysis of variance summarized in Table XXXIII. This table shows an F ratio of 6.23 with an associated probability of less than 0.00001. There were highly significant differences in expressed teacher satisfaction with personal and social relationships with the principal and vice-principal. Therefore the null hypothesis was rejected.

The schematic comparison of ordered means indicates that sub-type IEiE ranked highest, followed by sub-types iEIE and IEIE. The differences among these three sub-types were not significant but all three sub-types were significantly higher than sub-type Ieie. Both sub-type IEiE and sub-type iEIE were also significantly higher than sub-type ieIe. In addition, sub-type IEiE was significantly higher than sub-types ieiE, IeIE and ieie.

Hypothesis 13: Satisfaction with working conditions. This hypothesis was tested by means of the analysis of variance presented in Table XXXIV which shows an F of 2.89 and a probability of 0.00022. Therefore the hypothesis that there would be no significant differences in expressed teacher satisfaction with working conditions among the sixteen sub-types of schools was rejected.

The comparison of ordered means which is a part of Table XXXIV indicates that sub-type iEIE ranked highest, followed by sub-types iEie and IEIe. However the only significant difference, at



TABLE XXXIII

ANALYSIS OF VARIANCE OF EXPRESSED TEACHER SATISFACTION  
WITH PERSONAL AND SOCIAL RELATIONSHIPS BY SCHOOL  
SUB-TYPES CLASSIFIED ON BASIS OF LEADER BEHAVIOR

A. Analysis

Source	SS	MS	df	F	p
Groups	77.754	5.18	15	6.23	< 0.00001
Error	421.349	0.83	506		

B. Schematic Comparison of Ordered Means

IEiE iEiE IEiE IEiE iEiE IEiE iEiE IEiE IEiE IEiE IEiE IEiE IEiE  
iEiE IEiE iEiE

Note: Sub-types underlined by a common line do not differ significantly from each other at .01 level; sub-types not underlined by a common line do differ significantly at .01 level.



TABLE XXXIV

ANALYSIS OF VARIANCE OF EXPRESSED TEACHER SATISFACTION  
WITH WORKING CONDITIONS BY SCHOOL SUB-TYPES  
CLASSIFIED ON BASIS OF LEADER BEHAVIOR

A. Analysis

Source	SS	MS	df	F	p
Groups	35.447	2.36	15	2.89	0.00022
Error	413.510	0.82	506		

B. Schematic Comparison of Ordered Means:

iEIE iELe IELe IeLe IEie IEiE IEIE iEiE IeIE ieLe Ieie ieie ieIE  
IeiE iEie ieiE

Note: Sub-types underlined by a common line do not differ significantly from each other at .01 level; sub-types not underlined by a common line do differ significantly at .01 level.





the .01 level, was between sub-types iEIE and ieIE. Teachers in the former sub-type expressed greater satisfaction with working conditions.

Hypothesis 14: Satisfaction with social climate. Table XXXV summarizes the analysis of variance used to test the hypothesis that there would be no significant differences in expressed teacher satisfaction with the social climate generally among the sixteen sub-types of schools. This table shows an F ratio of 5.85 with a probability of less than 0.00001. Therefore the null hypothesis was rejected.

The schematic comparison of ordered means presented in Table XXXV shows that sub-type IEiE ranked highest, followed by sub-types iEie and IeIe. This latter sub-type, however, was not significantly different from any other sub-type. Sub-types IEiE and iEie were significantly higher, at the .01 level, than sub-type ieIe. In addition, sub-type IEiE was also significantly higher than sub-types ieIE, Ieie, IeIE, ieIE and ieie.

Hypothesis 15: Satisfaction, all things considered. The analysis of variance used to test this hypothesis is presented in Table XXXVI which shows an F of 6.50 and a probability of less than 0.00001. Therefore the null hypothesis was rejected. There were significant differences in expressed teacher satisfaction, all things considered, among the sixteen sub-types of schools.



TABLE XXXV

ANALYSIS OF VARIANCE OF EXPRESSED TEACHER SATISFACTION  
WITH SOCIAL CLIMATE BY SCHOOL SUB-TYPES  
CLASSIFIED ON BASIS OF LEADER BEHAVIOR

## A. Analysis

Source	SS	MS	df	F	p
Groups	78.254	5.22	15	5.85	<.00001
Error	451.625	0.89	506		

## B. Schematic Comparison of Ordered Means:

IEiE iELe lele IELe iEIE iEiE iEie IEie ieie leIE ieIE iele  
IEIE leiE ieie leie

Note: Sub-types underlined by a common line do not differ significantly from each other at .01 level; sub-types not underlined by a common line do differ significantly at .01 level.



TABLE XXXVI

ANALYSIS OF VARIANCE OF EXPRESSED TEACHER SATISFACTION,  
ALL THINGS CONSIDERED, BY SCHOOL SUB-TYPES  
CLASSIFIED ON BASIS OF LEADER BEHAVIOR

A. Analysis

Source	SS	MS	df	F	p
Groups	66.786	4.45	15	6.50	< 0.00001
Error	346.833	0.69	506		

B. Comparison of Ordered Means

IEiE iEie iEIE IEIe IEIE IEie iEiE IeIe iEie ieIe Ieie ieIE ieie  
IeiE IeIE ieiE

Note: Sub-types underlined by a common line do not differ significantly from each other at .01 level; sub-types not underlined by a common line do differ significantly at .01 level.



The nature of these differences is indicated by the comparison of ordered means which forms a part of Table XXXVI. Sub-type IEiE ranked highest, followed by sub-types iEIE and iEIE. All three of these sub-types were significantly higher than sub-types Ieie, ieIE and ieie. In addition, sub-types IEiE and iEIE were also significantly higher than sub-types ieIe and ieIE.

### Discussion of Findings

The nature of the differences in satisfaction among sub-types is, perhaps, best summarized in tabular form. Table XXXVII provides such a summary. In this table the three top ranking sub-types for each of the five measures of satisfaction have been compared with the three bottom ranking sub-types.

TABLE XXXVII

COMPARISON OF HIGHER RANKING AND LOWER RANKING  
SCHOOL SUB-TYPES FOR FIVE MEASURES OF  
EXPRESSED TEACHER SATISFACTION

Measure of Satisfaction	Higher Ranking Sub-Types			Lower Ranking Sub-Types		
Professional stimulation	IEiE	iEIE	IEIE	ieIE	ieIe	ieiE
Social relations	IEiE	iEIE	IEIE	ieiE	ieIe	Ieie
Working conditions	iEIE	iEIE	IEIe	Ieie	ieie	ieIE
Social climate	IEiE	iEIE	IeIe	IeIE	ieIE	ieIe
All things considered	IEiE	iEIE	iEIE	Ieie	ieIE	ieIe





A striking feature of Table XXXVII is the preponderance of high ranking sub-types in which the principal was above the median in expressive leader behavior and the absence of such principals in the lower ranking sub-types. There was not such a clear cut separation in the case of principal instrumental leader behavior, nor with either vice-principal instrumental or expressive leader behavior.

A second feature of Table XXXVII relates to the complementary sub-types iELe and leiE. Both of these sub-types epitomized the division in leadership functions upon which the theory for this study was based. Yet sub-type leiE did not rank among the three top sub-types in any of the five measures of satisfaction; sub-type iELe ranked second highest in three of the five measures of satisfaction. By itself, the fact that sub-type iELe tended to rank high might indicate that a division in leadership functions may promote satisfaction. However within the context of all the rankings in Table XXXVII this possibility appears to be remote. Rather, the strongest relationship appears to be between principal expressive leader behavior and teacher satisfaction.

The relationship between principal expressive leader behavior and teacher satisfaction became more distinct when major school types, that is school types classified on the basis of principal leader behavior style only, were compared. The comparison for all five measures of satisfaction is summarized in Table XXXVIII. Major types IE and iE were significantly higher, beyond the .01 level, than major types



TABLE XXXVIII

SUMMARY OF DIFFERENCES IN EXPRESSED TEACHER SATISFACTION  
BY MAJOR SCHOOL TYPES CLASSIFIED ON BASIS OF PRINCIPAL  
LEADER BEHAVIOR STYLE

Satisfaction Measure	F	p	Order of Means
Professional stimulation	25.46	.000	<u>IE iE</u> <u>Ie ie</u>
Social relations	23.11	.000	<u>IE iE</u> <u>Ie ie</u>
Working conditions	10.09	.000	<u>IE iE</u> <u>Ie ie</u>
Social climate	18.98	.000	<u>IE iE</u> <u>Ie ie</u>
All things considered	23.55	.000	<u>IE iE</u> <u>Ie ie</u>

- Notes:
1. Major types are defined thus:
 

IE	=	principal above median in instrumental and expressive leader behavior,
Ie	=	principal above median in instrumental below median in expressive,
iE	=	principal below median in instrumental above median in expressive,
ie	=	principal below median in instrumental and expressive leader behavior.
  2. Major types underlined by a common line do not differ from each other at .01 level; major types not underlined by a common line do differ significantly at the .01 level.



Ic and ie. The order of ranking was the same for the fifth measure.

A weaker but similar relationship was noted when school types classified on the basis of vice-principal leader behavior style, only, were analysed. The analysis is presented in Table XXXIX. In the four cases where probabilities exceed the .05 level of significance, vice-principals who were above the median in expressive leader behavior ranked higher in the particular measure of satisfaction than vice-principals who were below the median in expressive leader behavior.

The trends discovered during study of this problem can be summarized as follows. First, differences in satisfaction among school types classified on the basis on principal leader behavior were more distinct and consistent than differences in satisfaction among school types classified on the basis of vice-principal leader behavior. Second, differences in satisfaction among school types classified on the basis of expressive leader behavior were more distinct and consistent than differences in satisfaction among school types classified on the basis of instrumental leader behavior.

More generally, a clear relationship between a division of leadership functions and expressed teacher satisfaction did not materialize. Major types IE and iE tended to rank higher in all measures of satisfaction; major types Ic and ic tended to rank lower. Within these major types there was perhaps, a weak relationship between vice-





TABLE XXXIX

SUMMARY OF DIFFERENCES IN EXPRESSED TEACHER SATISFACTION  
BY MINOR SCHOOL TYPES CLASSIFIED ON BASIS OF VICE-  
PRINCIPAL LEADER BEHAVIOR STYLE

Satisfaction Measure	F	p	Order of Means
Professional stimulation	3.28	.021	<u>iE</u> <u>IE</u> <u>ie</u> <u>Ie</u>
Social relations	3.90	.009	<u>iE</u> <u>IE</u> <u>Ie</u> <u>ie</u>
Working conditions	0.89	.447	<u>iE</u> <u>Ie</u> <u>IE</u> <u>ie</u>
Social climate	4.11	.007	<u>iE</u> <u>IE</u> <u>Ie</u> <u>ie</u>
All things considered	4.21	.006	<u>iE</u> <u>IE</u> <u>Ie</u> <u>ie</u>

- Notes:
1. Minor types are defined thus:
 

IE	=	vice-principal above median in instrumental and expressive leader behavior,
Ie	=	vice-principal above median in instrumental below median in expressive,
iE	=	vice-principal below median in instrumental above median in expressive,
ie	=	vice-principal below median in instrumental and expressive leader behavior.
  2. Minor types underlined by a common line do not differ from each other at .05 level; minor types not underlined by a common line do differ significantly at the .05 level.



principal instrumental and/or expressive leader behavior and teacher satisfaction. This relationship, however, was much less clear than that between principal leader behavior and teacher satisfaction.

## II. LEADER BEHAVIOR AND RATED EFFECTIVENESS

Problem five asked, "What is the relationship between different combinations of leader behavior styles of the principal and vice-principal and the effectiveness of the principal and vice-principal, separately and jointly?" This problem led to the following null hypotheses:

16. There will be no significant differences in teacher assessment of the effectiveness of the principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

17. There will be no significant differences in teacher assessment of the effectiveness of the vice-principal among the sixteen sub-types of schools classified on the basis of leader behavior styles.

18. There will be no significant differences in teacher assessment of the effectiveness of the principal and vice-principal acting as a team among the sixteen types of schools classified on the basis of leader behavior styles.

### Findings

Hypothesis 16: Rated effectiveness of the principal. The one-way analysis of variance used to test this hypothesis is presented in Table XL. This summary shows an F of 8.79 with an associated



TABLE XL

ANALYSIS OF VARIANCE OF RATED EFFECTIVENESS OF THE  
PRINCIPAL BY SCHOOL SUB-TYPES CLASSIFIED  
ON BASIS OF LEADER BEHAVIOR

A. Analysis

Source	SS	MS	df	F	p
Groups	103.001	6.87	15	8.79	<0.00001
Error	395.285	0.78	506		

B. Comparison of Ordered Means:

IEiE IEIe IeiE IEIE iEIE iEie iEiE Ieie IeIE ieie ieIe ieiE ieIE  
 IEIe  
 IeIe  
 iEie

Note: Means underlined by a common line do not differ significantly from each other at .01 level, means not underlined by a common line do differ significantly at .01 level.



probability of less than 0.00001. Therefore the hypothesis that there would be no significant differences in teacher assessment of the effectiveness of the principal among the sixteen sub-types of schools was rejected.

The schematic comparison of ordered means which is a part of Table XL shows that sub-type IEiE ranked highest, followed by sub-types IEIe and IEie. The rated effectiveness of the principal in all three of these sub-types was significantly higher, beyond the .01 level, than in sub-types ieIe, ieiE and ieIE. Sub-type IEiE was also significantly higher than sub-types ieie and IeIE. The rated effectiveness of the principal was significantly lower in sub-type ieIE schools than in any other sub-type.

Hypothesis 17: Rated effectiveness of the vice-principal. Table XLI summarized the analysis of variance used to test the hypothesis that there would be no significant differences in teacher assessment of the effectiveness of the vice-principal among the sixteen sub-types of schools. This table shows an F ratio of 8.25 and a probability of less than 0.00001. Therefore the null hypothesis was rejected.

The schematic comparison of ordered means presented in Table XLI indicates that rated effectiveness of the vice-principal ranked highest in sub-type ieIE schools, followed by sub-types iEIE, IEIE and IeIE. In all of these sub-types the vice-principal was above the median in both instrumental and expressive leader behavior. At the









other extreme, sub-types lEie, leie, iEie and ieie ranked lowest. In all of these sub-types the vice-principal was below the median in instrumental and expressive leader behavior. In particular, sub-types ieIE, iEIE, IEIE and leIE were significantly higher than sub-types leie, iEie and ieie. In addition, sub-types ieIE and iEIE were also significantly higher than sub-types lEie and iEie.

Hypothesis 18: Rated effectiveness of the team. The analysis of variance used to test the hypothesis that there would be no significant differences in teacher assessment of the effectiveness of the principal and vice-principal acting as a team among the sixteen sub-types of schools is presented in Table XLII. This table shows an F ratio of 8.43 with an associated probability of less than 0.00001. There were significant differences among the sixteen sub-types. Therefore the null hypothesis was rejected.

The nature of the differences in rated effectiveness of the team among sub-types is summarized in the schematic comparison of ordered means which forms a part of Table XLII. Sub-type iEIE ranked highest, followed by sub-types lEiE, leiE and IEIE. At the other extreme, sub-types ieIE, leie and ieie ranked lowest. All three of these latter sub-types were significantly lower, beyond the .01 level, than sub-types iEIE and lEiE; sub-types leie and ieie were also significantly lower than sub-types leiE and IEIE.



TABLE XLII

ANALYSIS OF VARIANCE OF RATED EFFECTIVENESS OF THE  
LEADERSHIP TEAM BY SCHOOL SUB-TYPES CLASSIFIED  
ON BASIS OF LEADER BEHAVIOR

A. Analysis

Source	SS	MS	df	F	p
Groups	118.277	7.89	15	8.43	< 0.00001
Error	473.457	0.94	506		

B. Comparison of Ordered Means

iEIE IEiE IEIE IEIe iEiE IeIE ieie iEie ieIe ieIE Ieie ieie  
IeIE iEIE IeIe  
IEie

Note: Means underlined by a common line do not differ significantly from each other at .01 level; means not underlined by a common line do differ significantly at .01 level.





## Discussion of Findings

This section dealt with the relationships between different combinations of principal-vice-principal leader behavior styles and the rated effectiveness of the principal and vice-principal separately, and the two of them working jointly as a team. The findings have been summarized in Table XLIII, which compares the three sub-types in which rated effectiveness was highest with the three sub-types in which rated effectiveness was lowest.

TABLE XLIII

COMPARISON OF HIGHER RANKING AND LOWER RANKING SUB-TYPES FOR THREE MEASURES OF RATED EFFECTIVENESS

Measure of Rated Effectiveness	Higher Ranking Sub-Types	Lower Ranking Sub-Types
Principal	IEiE IEIe IEie	iele ieiE ielE
Vice-principal	ieIE iEIE IEIE	Ieie iEie ieie
Leadership Team	iEIE IEiE IeiE IEIE	ieIE Ieie ieie

A noteworthy feature of Table XLIII relates to the rated effectiveness of the principal. In the higher ranking sub-types the principal was above the median in both instrumental and expressive leader behavior; in the lower ranking sub-types he was below the median



in both instrumental and expressive leader behavior. Furthermore, Table XLIII shows that the same relationships existed for the vice-principal when his effectiveness was under consideration: in the higher ranking sub-types the vice-principal was above the median in both instrumental and expressive leader behavior; in the lower ranking sub-types he was below the median in both instrumental and expressive leader behavior.

A second feature of Table XLIII deals with the effectiveness of the leadership team. There was a tendency for sub-types in which the principal was above the median in expressive leader behavior to rank higher than those in which he was below the median in expressive leader behavior. The exception was sub-type leiE in which the principal and vice-principal shared complementary leader behavior styles. There was a similar tendency for sub-types in which the vice-principal was above the median in expressive leader behavior to rank higher than those sub-types in which he was below the median in expressive leader behavior.

The fact that sub-type leiE did rank higher in the one instance is perhaps not of great import, even though the theory on which the study was based had suggested this possibility. This particular sub-type tied for third highest ranking in only the one instance and differed significantly from only two other sub-types: leie and ieie. The other complementary sub-type, iEie, did not differ significantly from any



of the other sub-types. In fact Table XLII, page 135 shows that sub-type iEie ranked at the median. It therefore appears that here too, as was also the case with teacher satisfaction, a clear relationship between a division of leadership functions and rated effectiveness did not materialize.

It also appears that the principal's leader behavior style had no influence on the relationship between vice-principal leader behavior and rated effectiveness of the vice-principal. Table XLI, page 134 clearly indicates it was the four sub-types in which the vice-principal was above the median that ranked highest in vice-principal effectiveness; the four sub-types in which he was below the median ranked lowest. A similar condition holds for the influence of the vice-principal's leader behavior style on the relationship between principal leader behavior and rated effectiveness of the principal. Both of these findings ordinarily would, perhaps, not be surprising except that the theory had suggested effectiveness would be greater when the leader focused on one or the other of the two leader behavior styles and his partner focused on the complementary dimension. This does not appear to be the case for the rated effectiveness of either the principal or vice-principal: in neither case did the partner's leader behavior style appear to be differentially related to the leader's effectiveness.

The effectiveness of leadership team, likewise, did not appear to be related to differential combinations of leader behavior styles.





What does seem to be significant in Table XLII, page 135 is the fact that the higher ranking sub-types were those in which both leaders tended to be above the median in either or both instrumental and expressive leader behavior. The lower ranking sub-types were those in which both leaders tended to be below the median in either or both of instrumental and expressive leader behavior. This suggests the relationship between leader behavior styles and effectiveness of the team is an additive one, rather than a differential one.

### III. SUMMARY AND CONCLUSIONS

The two problems studied in this chapter focused on how leader behavior styles related to satisfaction and effectiveness. Study of the fourth problem revealed a clear tendency for all five measures of expressed teacher satisfaction to be high when principal expressive leader behavior was high. A weaker but similar condition held for the vice-principal.

The findings of the fifth problem indicated that effectiveness of the principal tended to be high when the principal was high in both instrumental and expressive leader behavior. This was also the case for the effectiveness of the vice-principal and his leader behavior style. In neither case did it appear that the leader behavior style of the one leader had any effect on the relationship between the leader behavior style of the other leader and that leader's rated effectiveness. Furthermore, leader behavior style did not appear to be differentially related





to the effectiveness of the team. Rather, the relationship appeared to be an additive one.

There were indications during study of both problems of a relationship, consistent with the theory, between a division of leadership functions and teacher satisfaction, principal effectiveness and team effectiveness. Specifically, sub-type iELe schools tended to be higher than certain other sub-types in teacher satisfaction. Sub-type leiE schools tended to be higher than certain other sub-types in rated effectiveness of the principal and of the leadership team. The nature of these relationships, by themselves, add support to the theory but within the context of all the other relationships this finding did not appear to be of great importance.



## CHAPTER VII

### SUMMARY AND CONCLUSIONS

The purpose of this study was to explore differences in leader behavior between principals and vice-principals. By so doing it was hoped a contribution could be made to the research on leadership by testing the usefulness of a particular theory to explain any differences which might emerge.

It was also hoped this study would provide information of use to the practising administrator. Duties, functions and leader behavior of principals and vice-principals, separately, have held the attention of many writers in recent years. The focus in this study has been somewhat unique in that it has explored, in a limited fashion, how these two leaders work together. In this final chapter the study is summarized and implications of interest to both administrators and research workers are set forth.

#### I. SUMMARY OF THE STUDY

It has been argued for many years that in order to survive organizations must be both effective and efficient. A similar dichotomy can also be noted in studies dealing with leadership. Initiation of structure and consideration, as leader behavior styles, have developed as concomitants to the effectiveness and efficiency concepts. Much



interest has focused on the extent to which a particular leader displays both of these styles, and also on the relationship between these styles and characteristics of the organization.

Some writers have suggested it is very difficult for a particular leader to perform well in both dimensions. As an alternative, a division in leadership functions between two leaders has been suggested. The one leader, dominant in task activities, might promote organizational effectiveness; the other leader, dominant in social-emotional activities, might promote efficiency. The possibility of such a division in leadership functions provided the basic orientation for this investigation which studied differences in leader behavior between principals and vice-principals.

The theoretical framework was based on Bales's studies of small group processes.<sup>1</sup> Using problem-solving as a framework, he pictured group processes occurring in two stages. During the initial instrumental stage, the behavior of group members is directed to the solution of a problem. Emphasis on task activities produces competition, aggression and tension. The survival of the group becomes threatened. At this point a second social-emotional expressive stage develops, characterized by catharsis and warmth of feeling which serves to re-establish the identity of the group.

---

<sup>1</sup> R. F. Bales, Interaction Process Analysis (Cambridge: Addison-Wesley Press, Inc., 1950).





During these cycles two roles in particular tend to emerge: the one filled by a task specialist is dominant during the instrumental phase; the other filled by a social-emotional specialist is dominant during the expressive stage.

Etzioni has used these concepts to suggest dual leadership may be characteristic of groups in formal organizations.<sup>2</sup> He claims that both instrumental and expressive dimensions are important but it is difficult for a single leader to perform well in both dimensions. Although situational factors are important, individuals are predisposed to be instrumental or expressive. If a given leader is dominant in one dimension, the complementary style tends to be vested elsewhere. If it is with an individual backed by positional power, then it is with a formal leader. If not with an individual backed by positional power, the leadership is vested with an informal leader.

The moderately small school is a particular formal organization in which structural characteristics may be suited to the emergence of two formal leaders. Both the principal and vice-principal are backed by organizational power. Both of them also have opportunity for frequent and equal interaction with staff members. Dual leadership theory therefore appeared to provide a suitable framework for the study of leadership roles of the principal and vice-principal.

---

<sup>2</sup>Amitai Etzioni, "Dual Leadership in Complex Organizations," American Sociological Review, 30:5 (October 1965), pp 688-698.



Three general areas were identified for particular study: the distribution of instrumental and expressive leadership functions between principals and vice-principals; the relationship between predispositions to be instrumental and expressive and the particular leadership style adopted; the relationship between leadership styles and teacher satisfaction, effectiveness of the principal, of the vice-principal and of the two of them acting together as a team.

Study of these problems was delimited to the instrumental and expressive leader behavior of the principal and vice-principal. Instrumental leader behavior was defined in terms of the LBDQ-XII subtests Initiation of Structure and Production Emphasis. Expressive leader behavior was defined in terms of the LBDQ-XII subtests Consideration and Tolerance of Freedom.<sup>3</sup> Likewise, predispositions to be instrumental or expressive were defined in terms of the Structure and Consideration subtests of the Leadership Opinion Questionnaire.<sup>4</sup>

Data for testing the hypotheses were collected from a random sample of Alberta schools having not less than eight nor more than fourteen staff members, including the principal and vice-principal.

---

<sup>3</sup> R. M. Stogdill, Manual for the Leader Behavior Description Questionnaire (Columbus: Bureau of Business Research, The Ohio State University, 1963).

<sup>4</sup> Edwin A. Fleishman, Leadership Opinion Questionnaire (Chicago: Science Research Associates, 1960).



The data showed that principals were significantly higher than vice-principals in instrumental leader behavior. The difference in expressive leader behavior between principals and vice-principals was not significant. These findings supported that part of the theory which argues the principal would be the instrumental leader. The failure of the vice-principal to surpass the principal in expressive leader behavior may indicate the principal can perform relatively well in the expressive dimension also. It may also indicate that some person other than the vice-principal emerges as the expressive leader.

Study of the second area dealing with supervisory attitude and leader behavior failed to reveal any consistent relationship between supervisory attitude and instrumental leader behavior for principals and vice-principals, separately or jointly. It was found, however, that supervisory attitude was weakly related to expressive leader behavior of the principal and vice-principal, separately and jointly.

The data dealing with the third area indicated that teachers tended to express greater satisfaction in those schools where the principal was relatively high in expressive leader behavior. There appeared to be a similar but weaker relationship between vice-principal expressive leader behavior and teacher satisfaction. This was not the case for either principal or vice-principal instrumental leader behavior. There was some slight indication that complementary leader behavior styles of the principal and vice-principal may be weakly related to





teacher satisfaction but within the context of the overall findings this relationship appeared to be a very tenuous one.

Teachers in schools where the principal was relatively high in both instrumental and expressive leader behavior tended to rate the effectiveness of the principal as relatively high. A similar relationship existed between the leader behavior style of the vice-principal and his effectiveness as assessed by the teachers. The principal's leader behavior style appeared to have no influence on the relationship between vice-principal leader behavior and rated effectiveness of the vice-principal; nor did the vice-principal's leader behavior style appear to influence the rated effectiveness of the principal.

The effectiveness of the principal and vice-principal, working as a team, did not appear to be related to differential combinations of principal and vice-principal leader behavior styles. Rather the relationship appeared to be an additive one: the effectiveness of the leadership team tended to be rated as relatively high in those schools where both the principal and vice-principal were relatively high in either or both of instrumental and expressive leader behavior.

## II. CONCLUSIONS AND IMPLICATIONS

In each of the problems studied in this project relationships were discovered which were consistent with the theory on which the research was based. Certain other relationships, however, were





lacking and still other relationships were not consistent with the theory. The purpose of this, the concluding section of study, is to assess the value of the theory in view of these relationships and to suggest implications which may provide the setting for further research as well as suggesting new outlooks for the practicing administrator.

### The Distribution of Leadership Functions

The salient feature of the first problem was the fact that principals were significantly higher than vice-principals in instrumental leader behavior but there was not a significant difference between the two groups in expressive leader behavior.

These findings might be interpreted as providing inconclusive support for the theory. The relative dominance of the principal in instrumental leader behavior was suggested by the theory. What must now be accounted for is the apparent failure of the vice-principal to emerge as the expressive leader. One possible explanation is that the expressive leadership is vested in some member of the group, other than the two leaders, that is with one of the teachers. The problem then becomes one of developing techniques to identify such possible leaders and determining situational as well as personal factors which might be related to the emergence of a non-formal expressive leader. For example, is it possible that the staff representative of the teacher's professional organization is the expressive leader?

These findings can also be interpreted without the framework



of dual leadership. Instrumental leader behavior deals with task oriented activities, that is the formal processes of the organization. To what extent are these activities determined by the individual leader and to what extent are they determined by the legal, cultural, social and economic constraints under which the school as an organization exists? It may be the principal, as senior officer, serves as a focus for all the instrumental activities of the school. When such activities are well structured, his instrumental leader behavior may be relatively high. One way to assess this possibility may be to study the relationship, if any, between degree of bureaucratization in the school and the instrumental leader behavior of the principal.

#### Supervisory Attitude and Leader Behavior

This study failed to find any consistent relationship between the supervisory attitude, Structure, and instrumental leader behavior. There did appear, however, to be weak relationship, consistent with the theory, between the supervisory attitude, Consideration, and expressive leader behavior.

The absence of a consistent relationship between supervisory attitude and instrumental leader behavior points to the possibility that situational factors may be of greater importance than individual qualities in this particular dimension. This possibility echoes Gibb who emphasized the importance of, "the present characteristics activities and goals of



the group."<sup>1</sup> as determinants of leadership. It may be that the formal leader serves as a focus for instrumental activities in the group; that instrumental leader behavior is only a symptom of a much more complex concept of group or organizational leadership encompassing all the formal processes of the organization.

Furthermore the formal leader may have a limited opportunity to develop his own particular talents within this context, in the expressive dimension. But the weakness of the relationship between supervisory attitude and expressive leader behavior indicates that here, too, situational factors may also be important. Expressive activities tend to focus on interpersonal relations. It may be that the leader's success in this dimension is determined in part by the extent to which communication patterns are coherent and group members are receptive to his endeavours.

#### Leader Behavior, Satisfaction and Effectiveness

The relationship discovered in this section of the study showed a clear tendency for teacher satisfaction to be high when expressive leader behavior of the principal was high. A weaker but similar condition held for the vice-principal. Rated effectiveness of the principal (and also the vice-principal) was independently related to his instrumental and expressive leader behavior. Leader behavior

---

<sup>1</sup> Supra, p. 38.





style did not appear to be differentially related to the effectiveness of the team. Rather, the relationship appeared to be an additive one.

More specifically, certain relationships consistent with the theory were discovered. For example, teachers in one of the complementary school types expressed greater satisfaction than those in certain other sub-types. Teachers in the other complementary sub-type rated the effectiveness of the principal and of the leadership team higher than in certain other sub-types. It is most difficult, however, to account for the other relationships on the basis of dual leadership theory. First, the theory did not assist in explaining why the principal's leader behavior style was not related to vice-principal effectiveness and why the vice-principal's leader behavior style was not related to principal effectiveness. Second, the theory did not directly account for the generally strong relationship between expressive leader behavior and satisfaction in problem four, and principal instrumental and expressive leader behavior and effectiveness in problem five. These relationships, alone, may not discount the theory. However, it is most difficult to explain the concomitant but weaker relationship with the vice-principal when the theory suggests a complementary relationship. Third, the theory did not directly account for the fact that both complementary sub-types did not tend to rank high in both satisfaction and effectiveness. Fourth, the additive rather than differential relationship between leader behavior styles and team effectiveness



believes the theory.

It appears, therefore, that dual leadership theory did not supply a sufficiently comprehensive framework for explaining differences in leader behavior between principals and vice-principals. Perhaps the extrapolation of processes in small experimentally-created groups to natural groups within formal organizations was an over-extension of the theory. Processes in the experimental group may be more fluid and dynamic, and less structured, than those in the formal group which may be more static and constrained by the structure of the organization.

More specifically, the delimitation to the study of the leader behavior of the formal leaders, only, may have imposed a narrowness in scope which the theory could not accommodate. If the vice-principal views the major function of his role to be a preparation for the principalship, then he may try to emulate the behavior of this principal as much as possible. Hence the tendency in this study for the vice-principal to make a supplementary rather than a complementary contribution. Perhaps a re-casting of the research design that would identify leaders by sociometric techniques might reveal an instrumental-expressive division of leadership functions between two focal persons on the staff.

#### Concluding Statement

The preceding sections have reviewed the inadequacy of dual



leadership theory as a framework for studying differences in leader behavior between principals and vice-principals. The question now becomes one of considering what alternatives, if any, might be implied from the study.

It would seem that any alternative to dual leadership must somehow integrate the following relationships discovered in this study: 1) the relative dominance of principals, as a group, over vice-principals, as a group, in instrumental leader behavior, 2) the tendency for differences involving principals to be more highly significant than differences involving vice-principals, 3) the tendency for relationships involving expressive leader behavior to be more clearcut and consistent than relationships involving instrumental leader behavior.

One possible alternative is an orientation which looks at instrumental leader behavior as a function of formal processes within the organization, expressive leader behavior as a function of interpersonal relations. With this orientation, the principal might be viewed as the agent or focal person through whom the instrumental leadership of the school as a whole becomes manifest. Put differently, the instrumental leader behavior of the principal may be more a function of situational factors than any particular pattern of activities which he displays.

This approach might also explain why the vice-principal was lower than the principal in instrumental leader behavior and why





differences involving the principal were usually more highly significant than those involving the vice-principal. The explanation may relate to the perhaps obvious fact that the vice-principal is subordinate to the principal.

The distinction between formal processes and interpersonal relations also provides a plausible explanation for the greater consistency in relationships involving expressive leader behavior than those involving instrumental leader behavior. This study with its focus on leader behavior, only, neglected the influence of formal processes. Rather, the emphasis in both instrumental and expressive dimensions tended to be on interpersonal relationships. The relationship between formal processes and instrumental leader behavior might show a greater consistency than that between formal processes and expressive leader behavior.

Finally a formal processes - interpersonal relations dichotomy provides a plausible answer to one of the key arguments in dual leadership theory: that it is difficult for a single leader to function well in both instrumental and expressive dimensions. This approach does not deny the existence of the two dimensions but what it does is point to the possibility that they may be of a more independent nature rather than the interdependent and perhaps non-compatible one which dual leadership claims. Instrumental leader behavior may be almost entirely constrained by the political environment of the organization





at a given time. The unique, and direct, contribution of the leader may be largely expressive. It is in this dimension that he may act to mediate, and through his efforts over time, indirectly modify the instrumental environment.



## BIBLIOGRAPHY



## BIBLIOGRAPHY

### A. BOOKS

- Bales, Robert F. Interaction Process Analysis. Cambridge: Addison-Wesley, 1950.
- Barnard, Chester I. The Functions of the Executive. Cambridge: Harvard University Press, 1962.
- Bass, B. M. "Leadership Opinions as Forecasters of Supervisory Success," Journal of Applied Psychology, 40:345-346, 1956.
- \_\_\_\_\_. "Leadership Opinions as Forecasters of Supervisory Success: A Replication", Personnel Psychology, 11:515-518, 1958.
- Bennis, Warren G. Changing Organizations. New York: McGraw-Hill, 1966.
- Blau, Peter M. and W. Richard Scott. Formal Organizations: A Comparative Approach. San Francisco: The Chandler Publishing Company, 1962.
- Campbell, R. F. and R. T. Gregg (eds.). Administrative Behavior in Education. New York: Harper and Brothers, 1957.
- Cartwright, Dorwin, and Alvin Zander. Group Dynamics. New York: Row, Peterson and Company, 1960.
- Cooley, William W., and Paul R. Lohnes. Multivariate Procedures for the Behavioral Sciences. New York: John Wiley and Sons Inc., 1962.
- Cooper, W. W., H. J. Leavitt, and M. W. Shelly II. New Perspectives in Organization Research. New York: John Wiley and Sons Inc., 1964.
- Dubin, Robert, and others. Leadership and Productivity. San Francisco: Chandler Publishing Company, 1965.
- Ebel, R. L. Measuring Educational Achievement. Englewood Cliffs: Prentice Hall Inc., 1965.





- Etzioni, Amitai. A Comparative Analysis of Complex Organizations. New York: The Free Press of Glencoe, 1961.
- Ferguson, George A. Statistical Analysis in Psychology and Education. Second edition. New York: McGraw-Hill Book Company, 1966.
- Festinger, Leon, Stanley Schacter and Kurt Back. Social Pressures in Informal Groups. New York: Harper and Brothers, 1959.
- Fleishman, Edward A. Manual for the Leadership Opinion Questionnaire. Chicago: Science Research Associates, 1960.
- Golembiewski, Robert T. The Small Group. Chicago: The University of Chicago Press, 1962.
- Gouldner, Alvin W. Studies in Leadership. New York: Russell and Russell, 1965.
- Guilford, J. P. Fundamental Statistics in Psychology and Education. New York: McGraw-Hill Book Company, 1965.
- Halpin, Andrew W. Manual for the Leader Behavior Description Questionnaire. Columbus: Bureau of Business Research, The Ohio State University, 1957.
- \_\_\_\_\_. The Leadership Behavior of School Superintendents. Chicago: Midwest Administration Center, 1959.
- \_\_\_\_\_. Theory and Research in Administration. New York: The Macmillan Company, 1966.
- Hare, A. Paul, Handbook of Small Group Research. New York: The Free Press of Glencoe, 1963.
- Henry, Nelson B. (ed.). The Dynamics of Instructional Groups. Chicago: The National Society for the Study of Education, 1960.
- Homans, George C. The Human Group. New York: Harcourt Brace and World, Inc., 1950.
- Katz, David, and R. L. Kahn. The Social Psychology of Organizations. New York: John Wiley and Sons, Inc., 1966.
- Kerlinger, Fred N. Foundations of Behavioral Research. New York: Holt, Rinehart and Winston, 1965.



- March, James G. (ed.). Handbook of Organizations. Chicago: Rand McNally and Company, 1965.
- \_\_\_\_\_, and H. A. Simon. Organizations. New York: John Wiley and Sons, 1958.
- McNemar, Quinn. Psychological Statistics. New York: John Wiley and Sons, Inc., 1962.
- Merton, Robert K. (ed.). Sociology Today. New York: Basic Books, 1959.
- Olmsted, Michael S. The Small Group. New York: Random House, 1959.
- Seashore, S. E. Group Cohesiveness in the Industrial Work Group. Ann Arbor: Institute for Social Research, University of Michigan, 1954.
- Stogdill, Ralph M. Individual Behavior and Group Achievement. New York: Oxford University Press, 1959.
- \_\_\_\_\_. Manual for the Leader Behavior Description Questionnaire -- Form XII. Columbus: Bureau of Business Research, The Ohio State University, 1963.
- \_\_\_\_\_, and A. E. Coons (eds.). Leader Behavior: Its Description and Measurement. Columbus: Bureau of Business Research, The Ohio State University, 1957.
- The School Act -- Office Consolidation. Edmonton: The Queen's Printer, 1963.
- Vroom, Victor H. Work and Motivation. New York: John Wiley and Sons, 1964.
- Winer, B. J. Statistical Principles in Experimental Design. New York: McGraw-Hill Book Company, 1962.

## B. PERIODICALS

- Andrews, J. H. M. "Recent Research in Leadership," Canadian Education, 13:15-24, September, 1958.



- Bennis, Warren G. "Leadership Theory and Administrative Behavior: The Problem of Authority," Administrative Science Quarterly, 4:259-301. December, 1959.
- Etzioni, Amitai. "Dual Leadership in Complex Organizations," American Sociological Review, 30:688-698, October, 1965.
- Janda, Kenneth F. "Towards the Explication of the Concept of Leadership in Terms of the Concept Power," Human Relations, 13:345-363, 1960.
- Marcus, Philip M. "Expressive and Instrumental Groups: Toward a Theory of Group Structure," American Journal of Sociology, 66:54-59, July, 1960.
- Peabody, Robert L. "Perceptions of Organizational Authority: A Comparative Analysis," Administrative Science Quarterly, 6:463-482, 1962.
- Schacter, S. and others. "An Experimental Study of Cohesiveness and Productivity," Human Relations, 4:229-238, 1951.
- Stogdill, R. M. "Personal Factors Associated with Leadership: A Survey of the Literature," Journal of Psychology, 25:35-71, January, 1948.
- \_\_\_\_\_, and O. S. Goode. "The Leader Behavior of Corporation Presidents," Personnel Psychology, 16:127-132, 1963.
- \_\_\_\_\_, O. S. Goode, and D. R. Day. "The Leader Behavior of United States Senators," Journal of Psychology, 56:3-8, 1963.
- Sykes, Graham M. "The Corruption of Authority Rehabilitation," Social Forces, 34:257-262, 1956.

### C. ESSAYS AND ARTICLES IN COLLECTIONS

- Bales, Robert F., and Philip E. Slater. "Role Differentiation in Small Decision-Making Groups," Family Socialization and Interaction Process, Talcott Parsons and R. F. Bales, editors. Glencoe: The Free Press, 1955. Pp. 259-306.





Etzioni, Amitai. "Organizational Control Structure," Handbook of Organizations, James G. March, editor. Chicago: Rand McNally and Company, 1965. Pp. 650-77.

Fiedler, Fred E. "A Contingency Model of Leader Effectiveness," Advances in Experimental Social Psychology, Vol. I, L. Berkowitz, editor. New York: Academic Press, 1964. Pp. 149-190.

. "Leadership and Leadership Effectiveness Traits: A Reconceptualization of the Leadership Trait Problem," Leadership and Interpersonal Behavior, L. Petrullo and B. M. Bass, editors. New York: Holt, Rinehart and Winston, 1961. Pp. 179-186.

. "Non-Fraternization between Leaders and Followers and its Effects on Group Productivity and Psychological Development," Symposium on Preventive and Social Psychiatry. Washington: Walter Reed Army Institute of Research, 1957. Pp. 337-343.

Fleishman, E. A. "A Leader Behavior Description for Industry," Leader Behavior: Its Description and Measurement, R. M. Stogdill and E. A. Coons, editors. Columbus: Bureau of Business Research, The Ohio State University, 1957. Pp. 103-119.

. "The Leadership Opinion Questionnaire," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors. Columbus: Bureau of Business Research, The Ohio State University, 1957. Pp. 120-133.

Gibb, Cecil A. "Leadership," Handbook of Social Psychology, Gardner Lindzey, editor. Cambridge: Addison-Wesley Publishing Company, Inc., 1954. Pp. 877-920.

Getzels, J. W. and H. A. Thelen. "The Classroom as a Unique Social System," The Dynamics of Instructional Change, Nelson B. Henry, editor. Chicago: The National Society for the Study of Education, 1960. Pp. 53-82.

Golembiewski, Robert T. "Small Groups and Large Organizations," Handbook of Organizations, James G. March, editor. Chicago: Rand McNally and Company, 1965. Pp. 87-141.





- Gouldner, Alvin W. "Organizational Analysis," Sociology Today, Robert K. Merton, editor. New York: Basic Books, 1959. Pp. 400-428.
- Halpin, Andrew W. "Paradigm for Research on Administrative Behavior," Administrative Behavior in Education, R. F. Campbell and R. T. Gregg, editors. New York: Harper and Brothers, 1957. Pp. 155-199.
- \_\_\_\_\_, and B. J. Winer. "A Factorial Study of the Leader Behavior Descriptions," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors. Columbus: Bureau of Business Research, The Ohio State University, 1957. Pp. 39-51.
- Hemphill, J. K. and A. E. Coons. "Development of the Leader Behavior Description Questionnaire," Leader Behavior: Its Description and Measurement, R. M. Stogdill and A. E. Coons, editors. Columbus: Bureau of Business Research, The Ohio State University, 1957. Pp. 6-38.
- Slater, P. E. "Role Differentiation in Small Groups," Small Groups, A. P. Hare, E. F. Borgatta and R. F. Bales, editors. New York: Alfred A. Knopf, 1966. Pp. 610-27.
- Starbuck, William H. "Organizational Growth and Development," Handbook of Organizations, James G. March, editor. Chicago: Rand McNally and Company, 1965. Pp. 451-533.
- Vroom, Victor H. "Some Psychological Aspects of Organizational Control," New Perspectives in Organization Research, W. W. Cooper and others, editors. New York: John Wiley and Sons, Inc., 1964. Pp. 72-86.
- Zaleznik, Abraham. "Interpersonal Relations in Organizations," Handbook of Organizations, James G. March, editors. Chicago: Rand McNally and Company, 1965. Pp. 574-613.

#### D. UNPUBLISHED MATERIALS

- Andrews, J. H. M. "Administrative Significance of Psychological Differences between Secondary Teachers of Different Subject Matter Fields." Unpublished Doctoral Dissertation, University of Chicago, 1957.



- Brown, A. F. "Reactions to Leadership." A Paper for the Fourth Canadian Conference on Educational Research. Toronto, 1966.
- "List of Operating Schools in Alberta 1966-67." Mimeographed Paper, Alberta Department of Education, 1966.
- Litzinger, W. D. "Entrepreneurial Prototype in Bank Management: A Comparative Study of Branch Bank Managers," Unpublished Doctoral Dissertation, University of Southern California, 1962.
- Miklos, E. "Leader Behavior Survey: 1966 Principals Leadership Conference." Unpublished Manuscript. Edmonton, 1966.
- Moyer, Donald C. "Teacher Attitudes Towards Leadership as They Relate to Teacher Satisfaction," Unpublished Doctoral Dissertation, University of Chicago, 1954.
- Von Fange, E. A. "Implications for School Administration of the Personality Structure of Educational Personnel," Unpublished Doctoral Dissertation, University of Alberta, 1961.



APPENDIX A

CORRESPONDENCE





7807 - 116th Street,  
Edmonton, Alberta.

Dear Superintendent:

I am writing to ask for your permission to contact certain schools in your superintendency in connection with research I am doing as a graduate student in educational administration at the University of Alberta.

Put simply, my research is concerned with differences in leader behavior between principals and vice-principals. In order to determine the nature of these differences, I would like to have six teachers from each school in the sample complete a Leader Behavior Description Questionnaire of the type used during the 1966 Alberta Principals' Leadership course and recent CSA leadership clinics. The major revision would be a change in format in order to accommodate responses for both the principal and vice-principal. I plan to have replies recorded directly on IBM answer sheets and machine scored. Complete anonymity is therefore assured. Only the school will be identified in the answer sheet, and that only by number.

I would also like to have the principals and vice-principals complete the Leader Opinion Questionnaire, an instrument which has not previously been used for research in Alberta. This questionnaire is similar to the LBDQ in that it deals with Structure and Consideration, the difference being that it gives a measure of the importance the leader attaches to these dimensions. It is in no way evaluative. I plan to transfer these responses, as well, to IBM cards on which the only identification will be that of the school, and that only by number.

I should like to emphasize that no individual, school or division will be singled out for special analysis in this study. My aim is merely to discover differences between principals and vice-principals in leader behavior styles, and how these differences relate to leader attitudes and job satisfaction.

School size in my sample will be limited to those schools having not less than eight or more than fourteen staff members, including the principal and vice-principal.



I am anxious that the sample be representative of all districts throughout the province. Particular schools to be used will be selected on a random basis. It would be greatly appreciated if you would grant me permission to contact those schools in your superintendency that are within the limits of my study. You may signify your permission to do so by completing the enclosed form and returning it to me in the stamped self-addressed envelope provided.

Thank you for your consideration.

Yours truly,

D. A. Girard.



District, Division or County  
Name:

Dear Mr. Girard:

You have my permission to contact the following schools in order to carry out your study dealing with differences in leader behavior between principals and vice-principals:

School Name	School Address	Principal's Name	Number of Teachers*	Grades Taught

\* Includes principal and vice-principal.

Note: List only those schools that have not less than eight nor more than fourteen staff members including principal and vice-principal. Use opposite side if necessary.

Yours truly,

Superintendent.

Note: If permission is not granted, please indicate above and return this form.



7807 - 116th Street,  
Edmonton, Alberta.

January, 1967

Dear Principal:

I am writing you, with the permission of your superintendent and the Chief Superintendent of Schools, to ask for the cooperation and assistance of you and your staff in completing a research study I am conducting as a Ph. D. student in educational administration at the University of Alberta.

Briefly, I am interested in differences in leader behavior between principals and vice-principals. I propose to study these differences by means of the Leader Behavior Description Questionnaire. This instrument has been used in numerous research studies in Alberta, and the particular form I intend to use is the same as that used for the 1966 Alberta Principals' Leadership Course and recent CSA leadership clinics. The major revision would be a change in format in order to accommodate responses for both the principal and vice-principal. I plan to have replies recorded directly on IBM answer sheets. Complete anonymity is therefore assured. Only the school will be identified on the answer sheet, and that only by number. It would take the teacher 15 to 20 minutes to complete this questionnaire.

I would also like to have you and your vice-principal complete a companion questionnaire called the Leader Opinion Questionnaire. This instrument is similar to the LBDQ in that it deals with Structure and Consideration, the difference being that it gives a measure of the importance the leader attaches to each of these dimensions. It is in no way evaluative. I plan to transfer these responses to IBM cards, as well, on which the only identification will be that of the school, and that only by number. It would take you and your vice-principal 10 to 15 minutes to complete this questionnaire.

I should like to emphasize that no individual school or division will be singled out for special analysis in this study. My aim is merely to discover differences between principals and vice-principals in leader behavior styles, and how these differences relate to leader attitudes and job satisfaction.





Your school has been selected on a random basis for inclusion in my study, and for this reason it would be greatly appreciated if you, your vice-principal and staff would agree to take part in it. I am anxious that the sample be representative of all schools, within the limits of size chosen, throughout the province. If you and your staff agree to assist me it would require the following:

1. Completion of the Leader Opinion Questionnaire by the principal.
2. Completion of the Leader Opinion Questionnaire by the vice-principal.
3. Completion of the LBDQ by any six teachers selected at random among the staff.

If agreeable, I would like to ask you to complete the attached form and send it to me as soon as possible. A stamped, self-addressed envelope is enclosed. This form asks you to supply the name of a member of your staff (it may be you, your vice-principal or a teacher) who would be willing to act as coordinator for the materials I will be sending out, or delivering personally.

I will mail the questionnaires directly, or deliver them, to the coordinator and ask him to distribute the relevant questionnaires to the principal, vice-principal and six teachers chosen at random by himself. After completing the questionnaires, respondents would be instructed to place each questionnaire in its individual envelope, seal it, and return it to the coordinator. The coordinator would then place all returns in a master, postage-prepaid, envelope and mail it to me.

Thank you for your consideration.

Yours truly,

D. A. Girard.

Encl.  
DAG:bb



School Name \_\_\_\_\_

\_\_\_\_\_

School Address \_\_\_\_\_

\_\_\_\_\_

Dear Mr. Girard:

Our school agrees to take part in your study.

The Staff Coordinator is \_\_\_\_\_  
(Please print.)

His telephone number is \_\_\_\_\_

Mailing address for questionnaires:

\_\_\_\_\_

\_\_\_\_\_

Yours truly,

Principal.

Note 1: If your school has more than one vice-principal please  
check here \_\_\_\_\_.

Note 2: If your school does not agree to take part in this study,  
please check here \_\_\_\_\_ and return this form in the  
enclosed, stamped, self-addressed envelope.



7807 - 116th Street,  
Edmonton, Alberta.

February, 1967

Dear Principal:

A few weeks ago I wrote you, asking for the cooperation of you and your staff in a research study I am conducting. I am enclosing a copy of the original letter which details the study.

I am writing you again at this time either because I have not received a reply from you as yet, or you have indicated that you and your staff are not willing to participate. Some of you in this latter category have volunteered what might appear to be valid reasons for non-participation, such as a newly appointed principal, or vice-principal, or a high percentage of new staff members.

Might I emphasize that your school was selected on a random basis for participation? Although the responses have been very good so far, running well over 80%, I am anxious that I get as close to complete participation as possible. Only in this way can I be certain that my statistical analysis is relatively free from bias. This is why I make a special plea to you and your staff to reconsider your decision.

I have already conducted a pilot study in the Edmonton area. The coordinators report that it takes less than 10 minutes for the principals and vice-principals to complete their questionnaires. It takes a little longer for the teachers (15-20 minutes) but they are also able to complete theirs in privacy and in their own time. Participants were also well satisfied that complete anonymity is preserved in the questionnaire, and found none of the questions objectionable.

To those who objected because there is no feedback from these studies, I pledge to send an abstract of my study to every participating school. Additionally, I have promised copies of my thesis to the Edmonton And Calgary school board.





Would you please reconsider your decision, and complete the enclosed form for me? Should you still decide not to participate I will understand that it is probably for good reason, but I am anxious to get as complete participation as possible.

Yours truly,

D. A. Girard.



7807 - 116th Street,  
Edmonton, Alberta.

February, 1967

Dear Coordinator:

Your principal has informed me that you have agreed to co-ordinate the collection of data for my research study. I am most grateful for this assistance.

Three sets of data are enclosed in this package: one each for the principal and vice-principal and a set of six for the teachers. Would you please hand the principal the envelope stamped "Principal" and the vice-principal the envelope stamped "Vice-principal."

If there are only six teachers on your staff please hand each one an envelope stamped "Teacher." If there are more than six teachers, select six teachers at random. The particular method of selection is not important as long as the selection is as random as possible. Perhaps one of the simplest methods is to number the staff alphabetically, put the numbers in a hat, and the first six numbers you draw out constitute the sample. Six teachers must complete the questionnaire.

When you distribute the envelopes to the respondents, would you remind them of the following points:

1. Use HB pencil in completing the IBM answer sheets.
2. Do not place any identification whatsoever on the answer sheets, questionnaire or envelope. (Be sure to tell them to save the envelope as they will need it for returning the answer sheets and questionnaires to you.)
3. All questions must be answered.

I would like the answers to be independent and for this reason might I suggest that you ask the respondents to return the questionnaires as soon as possible? Perhaps if you distributed them in the morning they could be collected at the end of the day.



Upon completing the questionnaires, the respondents are to place their answer sheet and questionnaire in the envelope, seal it, and return it to you. When the principal, vice-principal and six teachers have returned their envelopes place them all in the master envelope enclosed and mail to me. The number on this envelope is for identification of returns only, and will disappear when I start condensing the data.

Once again, I would like you to know how grateful I am for your assistance in completing this study.

Yours truly,

D. A. Girard

Encl.  
DAG:bb



7807 - 116th Street,  
Edmonton, Alberta.

March, 1967

PHONE: 433-6359

Dear Coordinator:

A few weeks ago I mailed you a set of questionnaires relating to the research I am doing as a graduate student at the University of Alberta. I sent you the questionnaires because your principal had indicated that your staff would assist me in the study and you had agreed to coordinate it in your school.

I am writing now to ask if you have received the questionnaires. I have reason to believe some of them may have gone astray in the mails. If such is the case in your school, please phone me collect as soon as possible and I will mail you a duplicate set.

If you have received the questionnaires, I would be most grateful if you would return them as soon as completed. Once again, if you have any questions about them please do not hesitate to phone me collect.

If you have returned the questionnaires please ignore this letter.

I must add that I plan to send you an abstract of my study when completed, in order that you and your staff will get some "feedback."

Thank you again for your assistance, and that of your staff. Without it, I could not have completed my thesis.

Yours truly,

D. A. Girard.

DAG:bb





## APPENDIX B

### TEACHER QUESTIONNAIRE



## LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE

Form XII      Copyright 1962

The Ohio State University

Dear Teacher:

Thank you for agreeing to assist me in my study. On the following pages is a list of items that may be used to describe the behavior of your principal and vice-principal.

Each item describes a specific kind of behavior, but does not ask you to judge whether the behavior is desirable or undesirable. Please do NOT evaluate the items in terms of "good" or "bad" but read each item carefully and respond in terms of how closely the statement describes your principal, or vice-principal, whichever the case may be.

It is important that your answers be "independent" so please do not discuss your answers with other teachers. Please be frank in your response with the assurance that individual answers are strictly confidential. Though there is no time limit, it will probably take 15 to 20 minutes to complete.

You are asked to record your responses on the enclosed IBM marking sheet. In order that complete anonymity can be preserved do not identify yourself in any way on this sheet, even though it has provision for your name and school. When you have completed the questionnaire, return it and the IBM answer sheet to the envelope, seal the envelope, and hand it to your coordinator.

The questionnaire has three parts. Use Part I of the answer sheet to record your 40 responses to Part I of the questionnaire. Likewise for Part II. The 10 questions in Part III should be recorded in answer 1 - 10 of Part III of the answer sheet.

Please use HB pencil for recording your answers. Please respond to every question.

If you have any comments about the study, I would be most grateful for them. Please record them on the back of this page.

Thank you again for your assistance with my study. I am most grateful for it.

Yours truly,

D. A. Girard.

DAG:bb



PART I - PRINCIPAL LEADER BEHAVIOR

Directions:

Use the following items to describe the leader behavior of your principal.

- a. READ each item carefully.
- b. THINK how frequently he engages in the behavior described by the item.
- c. DECIDE whether he (A) always, (B) often, (C) occasionally, (D) seldom or (E) never acts as described by the item.
- d. RECORD your responses under Part I of the IBM answer sheet.

-----

A = Very Frequently or Always  
 B = Often  
 C = Occasionally  
 D = Seldom  
 E = Very Rarely or Never

(The letters A, B, C, D, E, which follow each item are there merely for your convenience. Please record your responses directly on the IBM answer sheet.)

Note: For the pronoun "he" read "she" throughout, where applicable.

-----

- |   |           |
|---|-----------|
| 1. He lets the teachers on this staff know what is expected of them.      | A B C D E |
| 2. He allows the teachers complete freedom in their work.                 | A B C D E |
| 3. He is friendly and approachable.                                       | A B C D E |
| 4. He encourages overtime work.   | A B C D E |
| 5. He encourages the use of uniform procedures.                           | A B C D E |
| 6. He permits the teachers to use their own judgment in solving problems. | A B C D E |

(Please respond to EVERY item.)





A = Very Frequently or Always  
 B = Often  
 C = Occasionally  
 D = Seldom  
 E = Very Rarely or Never

- |   |           |
|---|-----------|
| 7. He does little things to make it pleasant to be a teacher on this staff. | A B C D E |
| 8. He stresses being ahead of other schools.                                | A B C D E |
| 9. He tries out his ideas in the group.                                     | A B C D E |
| 10. He encourages initiative among the teachers on this staff.              | A B C D E |
| 11. He puts suggestions made by the group into operation.                   | A B C D E |
| 12. He needles the teachers for greater effort.                             | A B C D E |
| 13. He makes his attitudes clear to the group.                              | A B C D E |
| 14. He lets the teachers do their work the way they think best.             | A B C D E |
| 15. He treats all staff members as his equals.                              | A B C D E |
| 16. He checks to see that teachers cover the course of studies.             | A B C D E |
| 17. He decides what shall be done and how it shall be done.                 | A B C D E |
| 18. He assigns a task, then lets staff members handle it.                   | A B C D E |
| 19. He gives advance notice of changes.                                     | A B C D E |
| 20. He pushes for higher academic standards.                                | A B C D E |
| 21. He assigns staff members to particular tasks.                           | A B C D E |
| 22. He respects the professional freedom of a classroom teacher.            | A B C D E |
| 23. He keeps to himself.  | A B C D E |
| 24. He sets an example by working hard himself.                             | A B C D E |

(Please respond to EVERY item.)



A = Very Frequently or Always

B = Often

C = Occasionally

D = Seldom

E = Very Rarely or Never

- |     |   |           |
|-----|---|-----------|
| 25. | He makes sure that his role in the school is understood by the staff members. | A B C D E |
| 26. | He is reluctant to allow the teachers any freedom of action.                  | A B C D E |
| 27. | He looks out for the personal welfare of teachers in this school.             | A B C D E |
| 28. | He permits the teachers to take it easy in their work.                        | A B C D E |
| 29. | He schedules the work to be done.   | A B C D E |
| 30. | He allows the group a high degree of initiative.                              | A B C D E |
| 31. | He is willing to make changes.  | A B C D E |
| 32. | He drives hard when there is a job to be done.                                | A B C D E |
| 33. | He maintains definite standards of performance.                               | A B C D E |
| 34. | He trusts teachers to exercise good judgment.                                 | A B C D E |
| 35. | He refuses to explain his actions.  | A B C D E |
| 36. | He urges teachers to improve constantly the standard of instruction.          | A B C D E |
| 37. | He asks that teachers in this school follow standard rules and regulations.   | A B C D E |
| 38. | He permits each teacher to set his own pace.                                  | A B C D E |
| 39. | He acts without consulting the staff.   | A B C D E |
| 40. | He ensures that teachers work to their full capacity.                         | A B C D E |

(Please respond to EVERY item.)



- A = Very Frequently or Always  
 B = Often  
 C = Occasionally  
 D = Seldom  
 E = Very Rarely or Never

## PART II - VICE-PRINCIPAL LEADER BEHAVIOR

### Directions

You are asked to use the same set of items above, starting with Item 1 and ending with Item 40, to describe the leader behavior of your vice-principal. Proceed as before, this time using Part II of the IBM answer sheet to record your responses.

## PART III - SOME INFORMATION ABOUT YOU AND YOUR SCHOOL

Please record your responses to this section under Part III of the IBM answer sheet. The information asked for is for research purposes only and even average scores are strictly confidential.

1. How long have you been in this school, including this year?  
 A - 1 year, B - 2 years, C - 3 to 5 years, D - 6 to 10 years,  
 E - 11 or more years.
2. Your sex: A - male, B - female.
3. How satisfied are you with being a teacher in this school, all things considered?

- A - High, can scarcely imagine better.  
 B - Above average, few other better.  
 C - Average, others better, others worse.  
 D - Below average, many others better.  
 E - Low, most any other better.

(Use this key for answering the following four questions as well.)

4. How satisfied are you with the social climate generally in this school? A B C D E
5. How satisfied are you with the working conditions generally in this school? A B C D E

(Please respond to EVERY item.)



- A - High, can scarcely imagine better.
- B - Above average, few other better.
- C - Average, others better, others worse.
- D - Below average, many others better.
- E - Low, most any other better.

6. How satisfied are you with the professional stimulation, assistance and direction provided by the principal and vice-principal in discharging your duties? A B C D E
7. How satisfied are you with the personal and social relationships you enjoy with the principal and vice-principal? A B C D E
8. How effective do you consider your principal to be in performing all the various functions which he should perform? A - Outstanding, B - Above the average, C - Average, D - Below the average, E - much below the average. (Use this key for answering the following two questions as well.) A B C D E
9. How effective do you consider your vice-principal to be in performing all the various functions he should perform? A B C D E
10. How effective do you consider the principal and vice-principal to be acting as a team? (Answer this questions without regard for the independent effectiveness of either the principal or vice-principal.) A B C D E

(Please respond to EVERY item.)

Thank you! Place this questionnaire and the answer sheet in the envelope, seal it and return to your coordinator.





## SCORING KEY FOR PART I TEACHER QUESTIONNAIRE

Instrumental leader  
Behavior items

Expressive leader  
behavior items

1	2
4	3
5	6
8	7
9	10
12	11
13	14
16	15
17	18
20	19
21	22
24	23 *
25	26 *
28 *	27
29	30
32	31
33	34
36	35 *
37	38
40	39 *

\* starred items are scored 1 2 3 4 5  
 all other items are scored 5 4 3 2 1



## APPENDIX C

### ADMINISTRATOR QUESTIONNAIRE



7807 - 116th Street,  
Edmonton, Alberta.

February, 1967.

Dear Administrator:

Thank you for agreeing to assist me in my study. You will find enclosed a Leadership Opinion Questionnaire (LOQ) and a supplementary data sheet. When you have completed these, return them to the envelope, seal it and hand it to the coordinator.

Please note these instructions:

1. Please respond to EVERY item.
2. Do not identify yourself in any way. In particular do not complete the front page of the LOQ which asks for name, date, company and position.
3. Read the instructions on the front page, then answer the questionnaire items as directed. The word "unit" which appears in some questions means your school staff.
4. When you have completed the LOQ and the supplementary data sheet, return them to the envelope, seal it and hand it back to the coordinator.

Those of you who are familiar with the LBDQ will see some similarities between it and the LOQ. As this is the first time to my knowledge that the LOQ has been used in an educational setting, I would be interested in your assessment of it, even though this is beyond my immediate research interest. If you wish, you may comment on the back of the supplementary data sheet. Such comments would be welcome.

Thank you again for your assistance with my study.

Yours truly,

D. A. Girard.

DAG:bb





## APPENDIX D

### DISTRIBUTION OF SCHOOLS BY SUB-TYPES



DISTRIBUTION OF SCHOOL SUB-TYPES  
CLASSIFIED ON BASIS OF SUPERVISORY ATTITUDE

Sub-Type	Number of Schools
SCSC	1
SCSc	6
SCsC	3
SCsc	3
ScSC	8
ScSc	6
ScsC	6
Scsc	1
sCSC	1
sCSc	6
sCsC	5
sCsc	7
scSC	5
scSc	1
scsC	6
scsc	4
Total*	69

\* Thirteen principals and nine vice-principals  
were at the median



DISTRIBUTION OF SCHOOL SUB-TYPES  
CLASSIFIED ON BASIS OF LEADER BEHAVIOR STYLE

Leader Behavior Style	Number of Schools
IEIE	8
IEIe	5
IEiE	6
IEie	5
IeIE	7
IeIe	4
IeiE	4
Ieie	5
iEIE	4
iEIe	2
iEiE	5
iEie	8
ieIE	4
ieIe	9
ieiE	4
ieie	7
Total *	87

\* Two principals and two vice-principals  
were at the median.



# Leadership Opinion Questionnaire

by Edwin A. Fleishman

Raw Score	
S	C

  

Score		Norms Group	
S	C	S	C
%tile		Scale	

Name \_\_\_\_\_ Date \_\_\_\_\_  
 (Last) (First) (Middle)  
 Company \_\_\_\_\_ Position \_\_\_\_\_

## INSTRUCTIONS:

For each item, choose the alternative which most nearly expresses your opinion on how frequently you *should* do what is described by that item. Always indicate what you, as a supervisor, or manager, sincerely believe to be the desirable way to act. Please remember—there are no right or wrong answers to these questions. Different supervisors have different experiences and we are interested only in your opinions.

Answer the items by marking an "X" in the box before the alternative that best expresses your feeling about the item. *Mark only one* alternative for each item. If you wish to change your answer, draw a circle around your first "X" and mark a new "X" in the appropriate box.

S R A

SCIENCE RESEARCH ASSOCIATES, INC.  
 259 EAST ERIE STREET, CHICAGO, ILLINOIS 60611  
 Copyright © 1960, Science Research Associates, Inc.  
 All rights reserved. Printed in U.S.A.  
 Reorder No. 7-651





1. Put the welfare of your unit above the welfare of any person in it.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

2. Give in to your subordinates in discussions with them.

- ☐ Often
- ☐ Fairly often
- ☐ Occasionally
- ☐ Once in a while
- ☐ Very Seldom

3. Encourage after-duty work by persons of your unit.

- ☐ A great deal
- ☐ Fairly often
- ☐ To some degree
- ☐ Once in a while
- ☐ Very seldom

4. Try out your own new ideas in the unit.

- ☐ Often
- ☐ Fairly often
- ☐ Occasionally
- ☐ Once in a while
- ☐ Very seldom

5. Back up what persons under you do.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

6. Criticize poor work.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

7. Ask for more than the persons under you can accomplish.

- ☐ Often
- ☐ Fairly often
- ☐ Occasionally
- ☐ Once in a while
- ☐ Very seldom

8. Refuse to compromise a point.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

9. Insist that persons under you follow to the letter those standard routines handed down to you.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

10. Help persons under you with their personal problems.

- ☐ Often
- ☐ Fairly often
- ☐ Occasionally
- ☐ Once in a while
- ☐ Very seldom

11. Be slow to adopt new ideas.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

12. Get the approval of persons under you on important matters before going ahead.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

13. Resist changes in ways of doing things.

- ☐ A great deal
- ☐ Fairly much
- ☐ To some degree
- ☐ Comparatively little
- ☐ Not at all

14. Assign persons under you to particular tasks.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

15. Speak in a manner not to be questioned.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

16. Stress importance of being ahead of other units.

- ☐ A great deal
- ☐ Fairly much
- ☐ To some degree
- ☐ Comparatively little
- ☐ Not at all

17. Criticize a specific act rather than a particular member of your unit.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

18. Let the persons under you do their work the way they think is best.

- ☐ Always
- ☐ Often
- ☐ Occasionally
- ☐ Seldom
- ☐ Never

19. Do personal favors for persons under you.

- ☐ Often
- ☐ Fairly often
- ☐ Occasionally
- ☐ Once in a while
- ☐ Very seldom

20. Emphasize meeting of deadlines.

- ☐ A great deal
- ☐ Fairly much
- ☐ To some degree
- ☐ Comparatively little
- ☐ Not at all











- |   |  |  |  |
|---|--|--|--|
| 21.<br>Insist that you be informed on decisions made by persons under you.                    | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 31.<br>See to it that persons under you are working up to capacity.                    | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  |
| 22.<br>Offer new approaches to problems.  | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             | 32.<br>Stand up for persons under you, even though it makes you unpopular with others. | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  |
| 23.<br>Treat all persons under you as your equals.  | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 33.<br>Put suggestions made by persons in the unit into operation.                     | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             |
| 24.<br>Be willing to make changes.  | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 34.<br>Refuse to explain your actions.   | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             |
| 25.<br>Talk about how much should be done.  | <input type="checkbox"/> A great deal<br><input type="checkbox"/> Fairly much<br><input type="checkbox"/> To some degree<br><input type="checkbox"/> Comparatively little<br><input type="checkbox"/> Not at all | 35.<br>Ask for sacrifices from persons under you for the good of your entire unit.     | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             |
| 26.<br>Wait for persons in your unit to push new ideas.                                       | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 36.<br>Act without consulting persons under you.                                       | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             |
| 27.<br>Rule with an iron hand.  | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 37.<br>"Needle" persons under you for greater effort.                                  | <input type="checkbox"/> A great deal<br><input type="checkbox"/> Fairly much<br><input type="checkbox"/> To some degree<br><input type="checkbox"/> Comparatively little<br><input type="checkbox"/> Not at all |
| 28.<br>Reject suggestions for changes.  | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 38.<br>Insist that everything be done your way.  | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  |
| 29.<br>Change the duties of persons under you without first talking it over with them.        | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             | 39.<br>Encourage slow-working persons in your unit to work harder.                     | <input type="checkbox"/> Often<br><input type="checkbox"/> Fairly often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Once in a while<br><input type="checkbox"/> Very seldom             |
| 30.<br>Decide in detail what shall be done and how it shall be done by the persons under you. | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  | 40.<br>Meet with the persons in your unit at certain regularly scheduled times.        | <input type="checkbox"/> Always<br><input type="checkbox"/> Often<br><input type="checkbox"/> Occasionally<br><input type="checkbox"/> Seldom<br><input type="checkbox"/> Never                                  |



## SUPPLEMENTARY DATA SHEET - PRINCIPALS AND VICE-PRINCIPALS

Indicate your responses to the following questions by checking the appropriate blank. The information asked for will be coded on IBM data cards in order to preserve complete anonymity.

1. Your present position:      Principal \_\_\_\_\_, Vice-principal \_\_\_\_\_.
2. Total number of years in this school, including this year:  
1 year \_\_\_\_\_, 2 years \_\_\_\_\_, 3 to 5 years \_\_\_\_\_,  
6 to 10 years \_\_\_\_\_, 11 or more years \_\_\_\_\_.
3. Your age: Under 25 years \_\_\_\_\_, 25 to 34 years \_\_\_\_\_,  
35 to 44 years \_\_\_\_\_, 45 to 54 years \_\_\_\_\_, over 54 years \_\_\_\_\_.
4. Your sex: Male \_\_\_\_\_, Female \_\_\_\_\_.
5. Total years as principal, including this year: 0 years \_\_\_\_\_,  
1 year \_\_\_\_\_, 2 years \_\_\_\_\_, 3 to 5 years \_\_\_\_\_,  
6 or more years \_\_\_\_\_.
6. Total years as principal in this school, including this year:  
0 years \_\_\_\_\_, 1 year \_\_\_\_\_, 2 years \_\_\_\_\_, 3 to 5 years \_\_\_\_\_,  
6 or more years \_\_\_\_\_.
7. Total years as vice-principal, including this year: 0 years \_\_\_\_\_,  
1 year \_\_\_\_\_, 2 years \_\_\_\_\_, 3 to 5 years \_\_\_\_\_, 6 or more  
years \_\_\_\_\_.
8. Total years as vice-principal in this school, including this  
year: 0 years \_\_\_\_\_, 1 year \_\_\_\_\_, 2 years \_\_\_\_\_,  
3 to 5 years \_\_\_\_\_, 6 or more years \_\_\_\_\_.
9. How many years are you credited with for salary purposes:  
(Please drop fractional years.) 1 year \_\_\_\_\_, 2 years \_\_\_\_\_,  
3 years \_\_\_\_\_, 4 years \_\_\_\_\_, 5 or more years \_\_\_\_\_.
10. What degrees do you have? (Please check the highest applicable  
category.) None \_\_\_\_\_, One Bachelor's degree \_\_\_\_\_, Two or more  
Bachelors \_\_\_\_\_, Master's degree \_\_\_\_\_, Doctoral \_\_\_\_\_.
11. What grades are taught in your school?  
Grades I to VI \_\_\_\_\_, Grades I to IX \_\_\_\_\_,  
Grades I to XII \_\_\_\_\_, Grades X to XII \_\_\_\_\_.  
Other (specify) \_\_\_\_\_  
\_\_\_\_\_









**B29878**